

**Ethiopian Economics Association  
(EEA)**



***Liberalizing Financial Sector in Ethiopia:  
Constraints, Consequences and Policy Issues***

**Policy Working Paper 07/2022**

***November 2022***

*Liberalizing Financial Sector in Ethiopia:  
Constraints, Consequences and Policy Issues*

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## EXECUTIVE SUMMARY

The Ethiopian government is considering the possibility of opening up its financial sector to foreign operators. This paper examined the constraints, consequences, and policy issues of the planned liberalization process with the goal of assisting policy makers and practitioners in making the transition effective. More specifically, the current paper attempted to assess the competitiveness of existing local financial institutions (banks, MFIs, and insurance companies), determinants of their performance; their perceptions of the current financial market and policy, their relative positions with respect to international financial operations; and examine the expected costs and benefits of opening up the financial sector.

We collected both primary and secondary data from multiple sources using several different methods. The primary data was gathered from senior managers of banks (n=16), insurance companies (n=17) and micro and financial institutions (n=19) using a self-administered questionnaire, and from the National Bank of Ethiopia using an unstructured interview. Secondary data (1994-2020), such as financial statements of the respective financial institutions, were primarily obtained from the National Bank of Ethiopia.

Multiple approaches were used to analyze the data. For instance, the financial sector competitiveness was estimated using the Panzar-Rosse (P-R) model, while both static (for example, FEM, REM) and dynamic estimation (for example, GMM) models were used to estimate the determinants of the respective financial institutions. The consequence of financial liberalization was estimated using an Autoregressive Distributed Lag Model. In addition, we used frequency distribution and percentages to describe facts, perceptions, and opinions of research participants.

A number of noteworthy findings have been found out and summarized as follows.

The study revealed that the current competition level of the financial sector is of a monopolistic competitive nature for all the three sectors (banks, insurance, and MFIs) without exception. This leaves room for policy interventions that make the sector more competitive in the future, particularly for banks and insurance companies.

Firm specific characteristics such as capital adequacy, asset liquidity, asset quality, loan to deposit ratio and management efficiency were found to have positive and statistically significant effects on the performance of the banking sector in Ethiopia. The results show that the bank's management efficiency or

operational efficiency positively affects ROA and is statistically significant. Likewise, macroeconomic variables such as ATM per hundred thousand and GDP growth have a positive and statistically significant effect on the ROA of a bank. For insurance companies and microfinance institutions, financial performance is mainly driven by firm-specific factors (company characteristics).

Financial liberalization (as measured by deposit interest rates) has a positive long-run effect on GDP per capita. In addition, financial liberalization may improve GDP per capita growth through increased efficiency and competition in the short run. While the potential benefit of liberalization seems viable given that other things remain normal if the sector is opened up to foreign banks, it may reduce GDP per capita growth by reducing financial stability.

The Ethiopian financial sector performs poorly compared to some selected countries from multiple perspectives, such as bank branches per 100,000 adults, digital payments, ATMs per 100,000 adults, and loans requiring collateral (%).

Financial operators' perception of the overall Ethiopia's financial system is unwelcoming. In general, they perceive the status of the Ethiopian financial sector to be inefficient, less competitive, unstable, less innovative, undiversified, non-inclusive, and poorly capacitated.

The liberalization process can be more effective if implemented sequentially. Accordingly, opening up the secondary financial market should precede all activities related to liberalization of the financial sector, followed by liberalization of the capital account (offshore borrowing and multiple exchange rate markets<sup>1</sup>), liberalization of regulations on reserve ratio and interest rates, liberalization of the domestic financial sector to foreign investors, and privatization of existing public financial institutions.

Readiness of the financial system and financial institutions is vital to take advantage of the situation when liberalization takes place. To this end, ahead of liberalization, the government needs to establish a stock market in the country; financial institutions, particularly banks, should take advantage of the digital economy by actively involving in digital finance and multi-channel banking systems using state of the art technology and capitalizing on the technological advancements; the existing financial institutions need to build up global capabilities

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<sup>1</sup>A system where a country will have both fixed and floating foreign exchange rates at the same time, and both can be used when exchanging currencies in that country. In this situation, the market is divided into any number of segments, each with its own exchange rate

in technologies, knowledge, and skills; enhance their efficiencies (operation efficiency); hold adequate capital (capital development); increase their foreign currency access and reserve; increase their research and development budget; focus on continuous improvement and develop their learning capability; strengthen their innovativeness and being customer focused; may consider merger and acquisition strategies to build up their competitiveness; and need to develop their cyber security systems.

Innovation has been a challenge in the financial sector in Ethiopia. Major hindering factors include poor network infrastructure, and power shortage, especially, absence of or weak internet connectivity in the rural area; lack of awareness of the community in using innovations; and resistance to innovation; limited capacity in conducting research and development activities; restrictive regulations of the government of Ethiopia via National Bank; limited knowledge management and skilled manpower; poor infrastructure; and poor strategic leadership.

The financial sector's liberalization is expected to bring both benefits and costs to individual firms and the country as a whole. The benefits that the liberalization may bring include speeding up foreign direct investment, reducing the population to financial sector ratio; lowering lending interest rates; economies of scale; improving consumer and mortgage credit; and ensuring a more stable source of credit. While the negative consequences of liberalization may include a loss of macroeconomic stability and biased credit provision, causing small businesses to face credit shortages, foreign financial institutions may be unwilling to mobilize domestic capital, resulting in capital flow volatility.

The study results discussed above have remarkable implications for existing financial operators and the government as well. Building a vibrant financial system helps existing financial institutions and the country at large reap the benefits of financial sector liberalization. This requires existing financial institutions and policymakers to work hand in hand toward that goal. Current financial institutions need to increase their capacity-building efforts to enhance their human, technological, and financial capabilities. They need to increase their R&D investments to enhance their innovativeness and the breadth of their financial offerings. Similarly, the policy-making body (the government) needs to improve the human and technological capabilities of its regulatory body to be able to effectively manage the process that leads to a more liberal financial sector. In addition, the government should relentlessly work to create an enabling business

environment by revising its policy interventions and aligning them with the needs of the new environment. Furthermore, the government needs to strengthen its regulatory wing to be able to manage the risks associated with opening up the financial sector, such as market instability and capital flight. Finally, it would be ideal if both individual financial institutions and the government were given the opportunity to learn from the experiences of other countries (e.g., South Korea, Malaysia, etc.) and apply the lessons learned in their efforts to manage the planned change.

## ACRONYMS

ARDL	Auto-Regressive Distributed Lag
ATMs	Automatic Teller Machine system
CBE	Commercial Bank of Ethiopia
DFID	Department for International Development
GDP	Gross Domestic Product
GMM	Generalized Method of Moments
GTP II	Second National Growth Transformation Plan
IMF	International Monetary Fund
KYC	Know-Your- Customer
MFI	Microfinance Institutions
NBE	National Bank of Ethiopia
NGO	Non-Government Organization
OECD	Organization for Economic Co-operation and Development
REST	Relief Society of Tigray
ROA	Return on Asset
ROE	Return on Equity
SSA	Sub-Sahara Africa
TFP	Total Factor Productivity
WB	World Bank

# **1. Introduction**

## **1.1. Background and Justifications**

It is widely believed that financial liberalization is an essential part of the financial sector's development process, particularly in developing countries. The argument supporting financial liberalization goes back to McKinnon's (1973) and Shaw's (1973) paradigms. They argue that government intervention in the financial sector distorts the financial market, depresses savings, and leads to inefficient investment. The World Bank and IMF have endorsed this paradigm and the reform package prescribed for most developing countries as part of structural adjustment programs.

Since the 1980s, many developing countries have begun to implement financial liberalization schemes. There are many empirical studies in support of this argument. For instance, Demirgüç-Kunt et al. (1998) and Akinsola and Odhiambo (2017) concluded that foreign bank entry accelerated the domestic banking sector's efficiency, thereby contributing to long-run economic growth. Yoshino and Morgan (2016) indicate that opening the financial sector to foreign ownership leads to greater financial inclusion. Románova et al.'s (2018) study also suggests that opening the financial sector promotes competitiveness, innovation, and new product development. Financial liberalization can also be characterized by reducing state ownership in banks, and therefore, the participation of private ownership will increase operational efficiency (Dong et al., 2014). Moreover, the presence of foreign banks improves domestic banks' risk management capabilities (Lensink & Hermes, 2004).

Furthermore, previous researchers investigated whether the extent of financial intermediation development and the level of state ownership of the financial sector influence economic growth. Accordingly, Levine et al. (2000) revealed that greater financial intermediation development positively affected economic growth. Other scholars investigated the ownership structure of banks in 92 countries and found that higher government ownership of banks resulted in lower per capita GDP growth (Porta et al., 2002). They also found that higher government ownership of banks was associated with slower subsequent financial sector development and lower productivity growth.

However, unlike other East African neighbors (e.g., Kenya, Tanzania, and Uganda) and many other developing countries, Ethiopia has not yet opened its financial sector to foreign participation. As a result, the Ethiopian financial sector is

characterized by a non-competitive structure and strong capital control. On top of that, the sector has been dominated by state-owned banks. Hence, the closed nature of the Ethiopian financial sector may have constrained the country's financial development (Kiyota, Peitsch, and Stren, 2008). It has been argued that a poorly functioning financial system may negatively influence economic growth. For instance, studies show that financial repression may negatively impact financial sector development (King and Levine, 1993; Rossi, 1999). In addition, previous researchers who examined the liberalization of the Ethiopian financial sector argued that the country's economy would benefit from financial sector liberalization, especially from the entry of foreign banks and associated with the privatization of state-owned banks (Kiyota, Peitsch, and Stren, 2008).

The Ethiopian government is considering liberalizing its financial sector as part of its financial development strategy. Some of the recent reforms that the government has been undertaking include an economic reform to attract foreign direct investments and cluster firms to provide common infrastructure via industrial development parks. As part of this effort, the government is currently launching large national projects and special economic zones, such as Gada special economic zone in between Adama and Mojo town, and a free trade zone in Dire Dawa city, which necessitates the pooling of including foreign currency. Thus, in order to implement and put in place this special economic zone, there is a need to liberalize the banking sector so as to smoothly finance foreign direct companies. For instance, the government has recently opened the financial sector to Ethiopian-born foreigners, even though it has not announced any schedule or date on which it will allow entry of foreign companies into the Ethiopian financial sector (UN, 2021). We strongly believe that before opening up the financial sector that has remained closed and dominated by state-owned financial institutions for many decades, the government needs to undertake careful planning to minimize possible risks associated with the sector's liberalization. Empirical observation suggests that if handled inappropriately, financial liberalization may trigger destabilization in the financial system and trigger a financial crisis. Financial liberalization, for example, has a strong, negative relationship with financial sector stability, according to scholars such as Stieglitz (2000), Wu et al. (2017), Batuo et al. (2018), and Yin (2019). They indicated that the presence of foreign banks increases the probability of the banking sector crisis and makes the host sector fragile. Moreover, researchers point out that foreign banks' credit is skewed towards large firms (Bruno and Hauswald, 2014; Beck et al., 2018).

In general, studies show that the influence of financial liberalization on financial sector development and economic growth is unclear from both empirical and theoretical perspectives. This indicates that the move by the government of Ethiopia to liberalize its financial sector is a critical policy decision that needs to be supported by empirical pieces of evidence. Studies indicate that, in general, the Ethiopian financial sector has been studied, and hence little has been known as to the possible impacts of opening up the financial sector to allow participation of foreign financial institutions. Therefore, this research aims at providing research evidence to policymakers and scholars by examining constraints, consequences, and policy issues associated with Ethiopia's financial sector liberalization.

## **1.2. Research Questions**

The current research intends to address the following basic research questions:

What is the current level of competitiveness of financial institutions in Ethiopia in the context of the domestic market?

- What are the key determinants of financial institutions' performances in Ethiopia?
- How do financial operators perceive the current financial market and policy in Ethiopia?
- What is the relative position of the Ethiopian financial sector in the context of the global financial operations?
- What would be the possible costs and benefits if the Ethiopian financial sector were liberalized (opened up to foreign participation)?
- What is the extent of financial operators' awareness of the consequences of financial market liberalization?
- What are the overriding issues expected to be a bottleneck for financial inclusion in Ethiopia?

## **1.3. General Objective**

The overall goal of this study was to examine the constraints, consequences, and policy issues associated with the liberalization of the Ethiopian financial sector.

## **1.4. Specific objectives**

In line with the above major objective, the study was aimed to achieve the following specific objectives:

- a. Examine the competitiveness of financial institutions (banks, MFIs, insurance companies) in Ethiopia;
- b. Investigate determinants of financial institutions' performances in Ethiopia;
- c. Elucidate financial operators' perception of the current financial market and policy in Ethiopia;
- d. Determine the relative position of domestic financial institutions to the expected international financial operations;
- e. Examine the costs and benefits associated with the liberalization of the Ethiopian financial sector;
- f. Assess the financial operators' awareness level of the consequences of financial market liberalization;
- g. Identify the overriding issues expected to be a bottleneck for financial inclusion in Ethiopia.

## **1.5. Scope of the Study**

This study focuses on the constraints, consequences, and policy issues associated with the liberalization of the Ethiopian financial sector. Issues such as incumbent financial institutions' perception of the existing financial market and policy, domestic financial institutions' competition, and the gains and losses of opening the financial sector to foreign operators were discussed. To address the issues, we have collected primary data from the head offices of financial institutions that started operations before 2018. Thus, we have included 16 commercial banks, 16 insurance companies, and 19 microfinance head offices operating in Addis Ababa. Moreover, based on data availability, the banking, insurance, and microfinance sectors' secondary data were collected for 1994-2020, 1996-2020, and 2010-2020, respectively. The main sources of the data were the National Bank of Ethiopia, the World Bank Database for the Financial Development Indicators and the International Monetary Fund for the financial reform indicators.

## 1.6. Significance

Financial sector liberalization policy is an important agenda item for the Ethiopian government. Since empirical investigations in different parts of the world on financial sector liberalization have witnessed mixed effects on host economies, careful planning and evidence-based policy decisions are paramount. For this reason, this study would provide policy input for the government of Ethiopia concerning the constraints and consequences of financial sector liberalization for the Ethiopian economy. Thus, the study has significance for the government and financial operators in Ethiopia to have strategic readiness and copying mechanisms for the competition they could face if the sector is opened up to the rest of the world.

## 2. Review of Literature

### 2.1. Definitions of key concepts

Throughout the research, terms such as financial liberalization, depth, accessibility, efficiency, inclusion, stability and competition have been used repetitively. Thus, these concepts shall be defined as follows:

**Financial liberalization**<sup>1</sup>: it can be characterized as the process of giving the market the authority to determine who gets and grants service and at what price, allowing entry into the financial-services industry to any company meeting criteria based on prudential considerations (concerning capital, skills, and reputation). It also gives them the autonomy to run their affairs, withdrawing from the ownership of financial institutions, and abandoning control over international capital movements. This characterization suggests six dimensions of financial liberalization: (1) the elimination of credit controls, (2) the deregulation of interest rates, (3) the free entry into the banking sector or, more broadly, the financial-services industry, (4) bank autonomy, (5) private ownership of banks and (6) liberalization of international capital flows. However, in this study, financial liberalization means liberalization of domestic financial sectors to global operators or liberalization of capital flow

**Financial sector efficiency**: it is the effective utilization of resources and the reduction of costs, which are central to the success of financial intermediaries

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<sup>1</sup> (Gibson and Tsakalotos, 1994)

operating in a competitive environment. While innovations in service delivery through electronic systems and consolidation movements in the financial industry are geared toward improvements in efficiency indicators. In our case, efficiency indicators are measured by net interest margin, return on assets (profitability indicators) and overhead costs to total assets.

**Financial stability**<sup>2</sup>: It is about the absence of system-wide episodes in which the financial system fails to function (crises). It is also about the resilience of the financial systems to stress. A stable financial system is capable of efficiently allocating resources, assessing and managing financial risks, maintaining employment levels close to the economy's natural rate, and eliminating relative price movements of real or financial assets that will affect monetary stability or employment levels. In stability, the system will absorb the shocks primarily via self-corrective mechanisms, preventing adverse events from having a disruptive effect on the real economy or on other financial systems. A common measure of stability at the level of individual institutions is the z-score. It explicitly compares buffers (capitalization and returns) with risk (volatility of returns) to measure a bank's solvency risk. The z score is defined as  $z \equiv (k+\mu)/\sigma$ , where  $k$  is equity capital as percent of assets,  $\mu$  is return as percent of assets, and  $\sigma$  is standard deviation of return on assets as a proxy for return volatility. The popularity of the z-score stems from the fact that it has a clear (negative) relationship to the probability of a financial institution's insolvency, that is, the probability that the value of its assets becomes lower than the value of its debt. A higher z score indicates a lower likelihood of insolvency (Laeven and Levine, 2009; Iháková and Hesse, 2010).

**Financial sector performance**: Over the years, financial management theories have provided various indexes for measuring the financial sector's performance, but there is no single universally accepted measuring index (Soylu and Durmaz, 2013). However, many empirical studies (Bagh et al., 2017; Anggono, 2017; Koju, 2018) used Duo Pont model financial ratios for evaluating financial sectors' performance. The maximization of ROA was considered a major corporate performance indicator (Liesz, 2002). The return on assets (ROA) is the average ratio of net profits before tax to total assets. ROA indicates the ability of a bank to generate a profit from its total assets.

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<sup>2</sup> The definition has been taken from world bank homepage (<https://www.worldbank.org/en/publication/gfdr/gfdr-2016/background/financial-stability>)

**Financial access and inclusion**<sup>3</sup> means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way. Financial inclusion has been identified as an enabler for 7 of the 17 Sustainable Development Goals. Being able to have access to a transaction account is a first step toward broader financial inclusion since a transaction account allows people to store money and send and receive payments.

**Financial depth**<sup>4</sup>: Financial depth captures the financial sector relative to the economy. It is the size of banks, other financial institutions, and financial markets in a country, taken together and compared to a measure of economic output. A proxy variable that has received much attention in the empirical literature in this regard is private credit relative to gross domestic product (GDP). More specifically, the variable is defined as domestic private credit to the real sector by deposit money banks as a percentage of local currency GDP. Therefore, private credit excludes credit issued to governments, government agencies, and public enterprises. It also excludes credit issued by central banks.

**Financial sector competition**<sup>5</sup>: Competition in the financial system can be defined as the extent to which financial markets are contestable and the extent to which consumers can choose a wide range of financial services from various providers. Competition is often a desirable feature because it normally leads to increased institutional efficiency, lower costs for clients, and improved quality and range of financial services. Competitiveness is not an end in itself or a target. There are several approaches to measuring bank competition. These include interest spread decomposition; measures of bank concentration based on the “structure-conduct-performance” paradigm; regulatory indicators that measure the banking sector’s contestability; and direct measures of bank pricing behavior or market power based on the “new empirical industrial organization” literature. Instead of using concentration, much of the recent research on the subject has focused on direct measures of bank pricing behavior or market power based on the “new empirical industrial organization” literature and Panzar-Rosse H-statistic is

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<sup>3</sup> World bank- <https://www.worldbank.org/en/topic/financialinclusion/overview>

<sup>4</sup> <https://www.worldbank.org/en/publication/gfdr/gfdr-2016/background/financial-depth>

<sup>5</sup> Competitiveness Advisory Group to the President of the European Commission, June 1995

commonly used in much of the literatures. The elasticity of bank interest revenues to input prices is captured by the H-statistic<sup>6</sup>.

**Financial institution:** A financial institution (FI) is a company engaged in the business of dealing with financial and monetary transactions such as deposits, loans, investments, and currency exchange. Financial institutions encompass a broad range of business operations within the financial services sector, including banks, trust companies, insurance companies, brokerage firms, and investment dealers.

## 2.2. Context of the financial sector in Ethiopia

The history of the modern financial sector in Ethiopia started in 1905 with the establishment of the Abyssinian Bank, based on a 50-year agreement with the Anglo-Egyptian National Bank. Likewise, Ethiopia's insurance industry's emergence is traced back to the establishment of the Bank of Abyssinia in 1905. The bank acted as an agent for foreign insurance companies to underwrite fire and marine policies. However, the emergence of microfinance institutions is a recent phenomenon in Ethiopia. The first microfinance service in Ethiopia was introduced as an experiment in 1994 when the Relief Society of Tigray (REST) had attempted to rehabilitate drought and war-affected people through the rural credit scheme.

After the Italian departure, a well-structured financial system started to evolve in the 1940s. A government-owned bank, the State Bank of Ethiopia, was established in 1942. Several foreign bank branches and a private bank were competing with the government-owned commercial bank until they were nationalized and merged into one government-owned mono-bank in 1976. Before liberalization, the command economy, including political instability, had been the stumbling block to the growth of the financial sector in Ethiopia. The command system nipped the competitive banking situation that started to flourish during the 1960s and reigned over the 1974-1991 periods. Following the change of government in 1991 and the subsequent measures taken to liberalize and reorient the economy towards a system of an economy based on commercial considerations, the financial market was deregulated. Proclamation number 84/94 was issued to effect the deregulation and liberalization of the financial sector, and several private banks and insurance companies were established following the proclamation.

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<sup>6</sup> <https://www.worldbank.org/en/publication/gfdr/gfdr-2016/background/banking-competition>

Following Directives deepened the liberalization, including the gradual liberalization of interest rates, foreign exchange determination, and money market operation. By the end of 2019/2020, Ethiopia's financial sector includes 18 banks (16 private and 2 public), 18 insurance companies (one public and 17 private) and 41 microfinance institutions (11 public, 13 private and 17 NGOs) (NBE, 2019/2020). The number of branches of banks has significantly increased from 970 in 2010/11 to more than 6,511 in 2019/20 (NBE, 2020). As a result, the bank branch-to-population ratio dropped from 1:82,000 during 2010/11 to 1:15,702 in 2019/20 (NBE, 2011; 2020). Similarly, the insurance companies' branch network increased to 605, and the number of microfinance institutions reached 41 by 2019/2020. The World Bank's Findex report (2017) shows that the percentage of adults with an account rose to 35% in 2017 from 22% in 2014. Account usage has improved, with about 26% of adults saving at financial institutions (as compared to 14% in 2014) and 11% borrowing from financial institutions (as compared to 7% in 2014).

Even though Ethiopia has achieved its rapid financial sector growth after the financial sector has been opened to private ownership, Ethiopia's financial sector is still underdeveloped and characterized by low competition, high concentration, and low inclusion (WB, 2019). The performance of Ethiopia's financial sector on many financial metrics, including the number of banking branches, the percent of adults who have an account with formal financial institutions, ATMs per 100,000 adults, depositors and creditors for 1,000 adults, and mobile banking, is substantially behind the average Sub-Saharan African countries and neighboring countries. In 2014, only 34.8% of adults had an account with formal financial institutions, less than the SSA average of 42.6% (Global Findex, 2017). In the same year, 82% of adults have an account in Kenya, while in Rwanda, account ownership stands at 50%. In 2016, mobile banking penetration per 100,000 adults in SSA, Kenya and Rwanda was 24, 57, and 13 percent, respectively, compared to only 1% in Ethiopia (WB, 2017). The insurance and microfinance penetration rate also remains low in Ethiopia, at around 0.4% and 4%, respectively (WB, 2017).

There is also a huge investment-saving gap. According to the National Bank of Ethiopia (2019/2020) report, investment as a percentage of GDP was 30.4% during 2019/2020, while the growth in the domestic saving rate was only 20.9%. Due to this huge investment saving gap, public investment has been financed by tapping external financing, keeping government consumption low, and

deploying heterodox mechanisms such as controlled interest rates and financial repression (World Bank, 2019).

The majority of Ethiopians, mainly the rural community and households with little access to financial services and small savings, rely more on informal institutions for their financial needs. For example, according to Bessir's (2018) study, although 62% of Ethiopians reported saving money, only 26% of them saved formally at financial institutions, while 38% saved with a person outside of their family or at an informal saving club (for example, Iqub). 41% of Ethiopians said they borrowed money during the same period, but only 11% borrowed from financial institutions. The rest was borrowed from family or friends (31%) and a savings club (8%). This indicates a demand for using financial services because most people depend on informal financial institutions because of either a lack of physical access to formal financial institutions or a lack of awareness of using formal financial institutions. The assertion that Ethiopia prefers informal saving clubs to the formal financial sector is justified by its less successful financial inclusion strategy than other East African countries (Lakew et al., 2020).

Even though a series of financial sector reforms have been introduced since 1994, Ethiopia's financial sectors remain closed to foreign ownership and have no capital market. Over the past decades, it has been operating under a financial repression framework used by the government to manage its monetary and foreign exchange policy and finance large infrastructure projects and state-owned enterprises. Although one can observe a strong growth and revival of the private sector since partial liberalization in 1994, the state-owned banks seem to dominate the industry.

The existing empirical shreds of evidence show that the cross-border financial sector benefits the host countries' financial industries by increasing competition, increasing access to higher skills and expertise, better access to capital, and economies of scale. More broadly, they can also positively affect governance structures. For instance, upgrades in the quality of supervision and regulation in host countries are induced by foreign financial institutions and their home supervisors, who often introduce higher standards (e.g., International Financial Reporting Standards accounting). However, potential contagion effects can offset stability benefits as cross-border financial industries can also more easily propagate shocks from their home countries across the host economies. Furthermore, suppose the foreign financial sector focuses on high-end customers only ("cherry picking") or relies too much on formal information, thereby

precluding the lower end of the market. This could result in a limited impact on financial inclusion (IMF, 2015).

Thus, positive effects depend on a country's circumstances and existing market structures. For example, in a crowded market, the effects of greater competition might not materialize. In the African context of underdeveloped financial systems, the arrival of more skilled, better managed, and better-funded competitors can have a significant positive impact on host economies (IMF, 2015).

Though the government of Ethiopia has faced different pressures from different international institutions that attempt to liberalize the financial sectors, politicians retain their position not to liberalize the sectors. This might be based on the assumption that the introduction of foreign financial institutions to the financial industry in the country will jeopardize the financial sector in particular and the economy in general. The government's justification and concern are one-sided in that they ignore the possible potential benefits of financial liberalization. The politicians failed to consider the contradictory nature of financial liberalization regarding benefits and costs. Besides, they have not considered successful countries in liberalizing their financial sectors to sketch lessons or experience. Thus, international competition is non-existent and domestic competition is minimal in the Ethiopian financial sector. Therefore, it would appear that the highly closed nature of the Ethiopian financial sector would negate the positive effects of greater financial intermediation.

Currently, the government of Ethiopia, in recognition of the limitations of the previous model for the country's future trajectory, has initiated the implementation of a comprehensive structural reform program. Building on the objectives of the second national Growth Transformation Plan (GTP II), Ethiopian authorities unveiled a Homegrown Reform Agenda in September 2019 that complements the already initiated structural reforms (UN, 202, WB, 2019). This reform aims to ease business constraints and foster private sector development with sectorial and macroeconomic measures, including removing distortions in the financial sector. Recently, in a positive initial step forward, the government of Ethiopia passed a proclamation allowing foreign investors of Ethiopian origin to invest in the financial sector. This demonstrates that the current administration is willing to alleviate poverty by integrating the financial sector into the global financial industry. However, the current legal framework may not support consolidated supervision (WB, 2019); this is particularly important when Ethiopia opens the sector to foreign ownership.

Given the existing context of the Ethiopian financial sector, which is characterized by a noncompetitive nature, a huge investment-saving gap, low inclusion, high concentration, low technology usage, and nonconsolidated supervision, the main question here is what will be the consequences if the government of Ethiopia allows the entry of foreign investors in to the financial sector. This question has to be carefully considered and analyzed with the help of different theoretical and empirical evidence.

### **2.3. Theoretical literature review**

The following major theoretical works on financial sector liberalization and economic growth were reviewed.

*McKinnon–Shaw hypothesis*-As *already alluded to*, many of the theoretical arguments in favor of financial liberalization originate in the works of McKinnon (1973) and Shaw (1973)<sup>7</sup>. The McKinnon–Shaw model challenges the policy of financial repression, including the ceilings on interest rates, high reserve requirements, administrative credit allocation, and other government-induced distortions that were so prevalent in developing countries during the 1960s and 1970s. In particular, the model puts focus on the negative effects of ceilings on deposit and loan rates. The basic argument is that financial repression in the form of a ceiling on nominal interest rates will stall financial deepening and thereby economic growth. An interest rate ceiling, leading to low or negative real interest rates, essentially has two negative effects. First, it reduces savings, hence the amount of loanable funds intermediated through the formal financial system. Second, low real interest rates influence the marginal productivity of capital. Bankers have no incentive to ration credit according to marginal productivity considerations. Instead, they ration according to their own discretion, which in turn thwarts the efficient allocation of investible funds. High reserve requirements and directed credit programmes further intensify these detrimental effects. In sum, the McKinnon–Shaw Hypothesis model considers financial repression a disequilibrium phenomenon, which prevents markets from clearing and serving their allocative function optimally. The policy implications are straightforward: liberalize the

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<sup>7</sup> A survey of the early literature is available in Fry (1995).

financial system, that is, remove government-induced distortions, and allow the market mechanism to determine the allocation of credit<sup>8</sup>.

This financial liberalization thesis argues, essentially, that domestic financial sector liberalization will improve resource mobilization by increasing or improving: a) The financialization of savings; b) the rate of savings (both private and public), and by implication, investment; c) the quality of investment; d) the financing of production. As a result, economic growth will be augmented indirectly by increased level and quality of investment and directly by the increased use of improved financial technology. None of the alternative perspectives directly challenged the likelihood of increased financialization of savings from financial liberalization (though, from Stieglitz's perspective, it is not a necessary result and the opposite is possible). However, several of the alternative theoretical models argued that the saving rate would fail to increase, or even fall. The reasons encompass the income distribution effect (Akyuz, 1995), liquidity constraints (Campbell and Mankiw, 1989) and the prevalence of subsistence consumption (Ogaki, Ostry, and Reinhart, 1996). The proposition of improved quality of investment is contested by the neostructuralists, who argue that informal finance dominates formal finance, and to a lesser extent, by Stieglitz's argument that partial repression could dominate full liberalization. The neostructuralists also argue that formal finance is not necessarily more efficient than informal finance.

*Keynesian theory of Investment* - John Maynard Keynes (1936) propounded the theory. The theory emphasizes the central role of investment in the theory of aggregate output and employment. Keynes focused on investment as the driving force of aggregate demand and short run fluctuations in economic activity. According to the Keynesian school, a low interest rate bolsters investment and income, resulting in higher savings (see Khatkhate, 1988; 1972). Indeed, the main distinction between the Keynesian view and the McKinnon-Shaw hypothesis is the transmission mechanism between interest rates and economic growth. While the Keynesian school believes in a "prior investment" policy, the McKinnon-Shaw school believes in "prior savings." Keynes (1936), for instance, succinctly argued that prior savings have no more tendencies to release funds for investment than does prior spending. Consequently, for the Keynesian school, a high interest rate

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<sup>8</sup> Accordingly, policy measures have included the removal or reasoning of interest rate ceilings and reserve requirements. Similarly, entry barriers have been lowered, and foreign banks allowed in. Government interference in credit allocation has been scaled down, and banks and insurance companies have been privatised on a grand scale. Sometimes stock markets have been promoted.

policy discourages savings through its negative influence on investment and income, while for the McKinnon-Shaw school, high interest rates promote savings, investment, and income. The proponents of this view argue that the financial liberalization model ignores the adverse effects.

*Post-Keynesian critique* - Just as in the Keynesian school, the post-Keynesians believe that it is investment that determines savings, and not the other way around, and that high interest rates may stifle investment and growth (Warman and Thirlwall, 1994; Gibson and Tsakalotos, 1994). In general, the criticism of post-Keynesian apostles over the role of financial liberalization is based on two premises. Firstly, the Post-Keynesian school argues that the supply of bank credit is not exogenous, as treated by the McKinnon-Shaw school (Davidson, 1986; Asimakopoulos, 1986). Therefore, the post-Keynesians argue that if banks can create credit without increasing their deposits, an increase in financial savings may make no difference to the total credit given to the private sector (Warman and Thirlwall, 1994). Secondly, the post-Keynesians argue that high-interest rates may only result in stagflation, that is, a combination of high inflation and unemployment. According to Dutt (1990), if there is excess capacity in the economy, higher interest rates will only worsen income distribution, increase inflation, and reduce the economic growth rate. However, if the economy is at full employment, higher interest rates may improve income distribution and reduce the rate of inflation, but they will not necessarily increase growth<sup>9</sup>.

*Portfolio and inflation tax model*: The model was propounded by Tobin in 1965. The model was derived from the assumption of perfect substitutability of money and productive capital in Tobin's monetary growth model. The model shows that the capital-labor ratio and per capita incomes may be raised through financial repression that reduces the attractiveness of holding money vis-à-vis productive capital. This model stipulates that the return on capital rises relative to the return on money. Such circumstances encourage a shift from money to capital in household portfolios, higher capital to labor ratios, and increased productivity. Tobin's approach is expressed in a money and growth model that allocates wealth between money and productive capital for the overall economy (households and the private sector). The opportunity cost of holding money is depicted as the forgone return of productive capital. The dynamics of this model are based on an increased return that reflects higher capital-labor ratios, higher labor productivity, and hence higher per-capital income.

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<sup>9</sup> See also Serieux (1997)

*Stiglitz and Weiss critique:* Stiglitz (1994), for example, criticizes financial liberalization on the grounds that financial markets are prone to market failures. He suggests that there should be some form of government intervention that will not only make these markets function better but will also improve the performance of the economy. Specifically, Stiglitz advocates government intervention to keep interest rates below their market equilibrium levels. In the same vein, Stiglitz and Weiss (1981) show that the limits to which interest rates can be raised are direct consequences of imperfect information between lenders and borrowers. The basic intuition here is that, while a moderate increase in the lending rate would normally elicit a higher volume of lending, additional increases in rates beyond a certain level would prompt a lower level of lending activity by adversely changing the quality of borrowers in favour of those in the high-risk category.

*Mainstream perspectives:* Campbell and Mankiw (1990) challenged the idea of McKinnon-Shaw and especially their basic assumptions. Therefore, when the assumption of liquidity constraints is relaxed, “it will lead to a boom in consumption, and hence a fall in savings will follow investment and growth impediments.” Given information imperfection, Stiglitz (1994) also argues that financial repression can improve the efficiency with which capital is allocated. First, lowering interest rates improves the average quality of the pool of loan applicants. Second, financial repression increases firm equity because it lowers the cost of capital. Third, financial repression could be used with an alternative allocative mechanism, such as export performance, to accelerate economic growth. Fourth, directed credit programs can encourage lending to sectors with high technological spillovers.

*Heterodox perspectives:* This is a neo-structuralist critique. The critical difference between the McKinnon-Shaw financial liberalization hypothesis and the neo-structuralist view is the role of the informal financial sector (Odhiambo, 2004). The neo-structuralist school argues that because of the reserve requirements of banks, the diversion of funds from the informal to the formal sector (due to increased interest rates) may lead to a reduction in the total supply of loans to the private sector (see Buffie, 1984; Thirlwall, 2004). However, the validity of this argument depends largely on the relative size of the informal sector in the economy.

In particular, economists working in the neostructuralist tradition argued that, contrary to the presumption of the financial liberalization thesis, the formal financial sector was not necessarily the most efficient means of financial

intermediation in developing economies. They suggested, instead, that the informal financial sector (the “curb market”) was a more efficient conduit of savings (Taylor, 1983; Van Wijnbergen, 1983; Buffie, 1984). In their view, while financial liberalization would lead to an increase in the share of savings intermediated through the formal financial sector, if that increase came at the expense of the informal financial sector, the net effect on output and, presumably, investment would be negative. Therefore, the productivity effect suggested by McKinnon (1973) would not be forthcoming, and Shaw’s ‘intermediation effect’ of formal financial sector expansion would be nullified because it represented a shift in emphasis from more efficient to less efficient modes of intermediation rather than an outright expansion.

*New Keynesian critique:* New Keynesian economists also challenged the presumptions of the financial liberalization thesis (Burkett and Dutt, 1990; Akyuz, 1995). The clearest attempt at a rebuttal of the financial liberalization thesis came from Akyuz’s (1995) three-sector model, which differentiated among households, private firms, and the government. According to that model, the high interest rates of liberalized finance would benefit deposit-holding households (renters), who are lower savers than firms are. Moreover, the higher cost of debt would compromise firm profits. The private savings rate would fall because high-saving firms would face lower profits, while low-saving renters would receive a larger proportion of total income. Public savings would also contract as government revenue was compromised by lower taxes on interest income (as part of liberalization measures), while higher interest payments on government debt would increase spending. Thus, while the model accepted the McKinnon-Shaw presumption that an increase in deposit rates (and other liberalization measures) would increase the financialization of savings (financial deepening), such measures were also expected to lower private savings (because of the shift in income from firms to rentiers) and government savings (because of lower tax revenues and higher interest payments on debt). In effect, financial liberalization would increase financial savings but lower overall savings. The potential productivity effect of financial liberalization was not addressed in this model.

*Financial Liberalization Theory:* The theory was propounded by McKinnon and Shaw, Fry (1996). They rejected Keynesian monetarism and challenged Tobin’s argument. Instead, they introduced a model of an economy with underdeveloped financial markets. McKinnon based his arguments on the fact that developing economies are closed economies with limited access to external finance

and self-financing investments. McKinnon claimed that the governments of developing countries intervened in financial markets for specific reasons that revealed investment efficiency; import licensing policy implicitly directs funding to authorized importers. This can create opportunities for corruption and monopoly privileges, cheapening capital goods and indirectly subsidizing investment costs. As such, wealth redistribution can be achieved by participating in the funding of land ownership and creating implicit capital controls over foreign investments. They challenged the case for low controlled interest rates and financial repression, advocating financial liberalization and development as major economic growth-enhancing policies. Moreover, potential investors must first accumulate monetary assets before investing in physical capital.

Generally, from theoretical perspectives, there are costs and benefits of liberalization for the economy. According to Wei (2018), there are three main potential benefits of reducing barriers to cross-border capital flows: (1) lower cost of capital flows, especially for small and medium-sized firms; (2) better ability to handle income risks (with a lower sensitivity of household consumption to fluctuations in output); and (3) more discipline in macroeconomic policies. These potential benefits do not work out strongly in the data, especially in the last two.

There are four broad reasons why a developing country may fail to benefit from reducing barriers to capital flows: (1) distortions in the domestic financial market (resources do not go to the most productive firms), (2) distortions in the international capital market (tendency to over borrow in the international market, especially in short-term debt, and in debt denominated in a foreign currency), (3) distortions in the domestic labor market (which reduce the returns on capital and raise the probability of capital flight under an open capital account), and (4) weakness in the domestic public governance.

According to Obstfeld [1998] notes that there are costs associated with financial globalization: (a) a loss of fiscal autonomy since financial openness makes it hard to tax internationally footloose capital relative to labor due to the competition for foreign savings through tax incentives; (b) negative income distribution effects through changes in relative factor prices associated with factor movements; and finally (c) the increased susceptibility of participating countries to financial instability, often culminating in severe financial crises. Thus, financial globalization is well recognized to entail genuine costs and risks.

## 2.4. Analytical framework

### Financial sector competition

The theory of industrial organization (IO) studies business policy and market performance under specific competitive conditions. The key contribution of IO is the theory of competition (Van Witteloostuijn, 1992). Depending on the level of competition, any industry/market is classified as perfectly competitive, monopolistically competitive, an oligopoly, or a monopoly.

In industrial economics, a financial sector such as a bank, like a firm, is conceptualized as operating under a certain kind of market structure, providing a service to its customers, and incurring costs to produce this service. In the process, it has to compete with other financial institutions in the industry, using price and non-price instruments, and earn a return sufficient to justify its existence.

The theory of industrial organization suggests that financial sector competition can be inferred directly from the markup of prices over marginal costs (Lerner, 1934). However, due to a lack of detailed information on the financial sector's costs and prices, including bank products, this measure is often hard or even impossible to implement (Andrade, 2013).

Financial sector competition can be measured using structural (traditional industrial organization theory, market structure is exogenous) and non-structural (new empirical industrial organization; market structure is endogenous) methods. In the first case, structure-conduct-performance (SCP) and the efficient structure hypothesis (ESH) are the dominant theories in measuring financial sector competition. In the SCP approach, the degree of competition is easily inferred from the level of concentration in the industry, in which competition is minimal in highly concentrated markets and vice versa (BudhathokI et al., 2020). Due to the lack of empirical results that fully support the traditional IO theoretical framework, the New Industrial Organization (NEIO) theory proposes different methods for measuring the level of competition in an industry by making market structure an endogenous variable that a model will determine. In the NEIO theory, the market structure cannot be determined by simply looking at the number of firms or level of concentration in the industry (Gebeyehu, 2018).

The Panzar-Rosse H-statistics (Panzar and Rosse, 1987) and the Bresnahan Index (Bresnahan, 1982) are the two prominent methods used to empirically test financial sector competition based on the NEIO theory. Both methods assume that financial sectors are profit maximizing and that the market structure of an industry is endogenously determined by profit-maximization conditions. The Panzar-Rosse

(P-R) method is highly applied for measuring competition in the financial sector, including the banking sector (Bikker et al., 2012). Due to its modest data requirements, single-equation linear estimation, and robustness to market definition, this method has been found with widespread applications in the literature (Shaffer, 2004a).

### **Determinants of financial sector performance**

Financial management theories have, over the years, provided various indexes for measuring the financial sector's performances, but there has been no single universally accepted measuring index (Soylu and Durmaz, 2013). However, many empirical studies (Bagh et al., 2017; Anggono, 2017; Koju, 2018) used DuPont model financial ratios for evaluating financial sectors' performance. The DuPont model is a framework for analyzing the fundamental performance of a firm. Initially, the DuPont model was used to analyze DuPont's fundamental performance. Donaldson Brown, an electrical engineer, first introduced the DuPont model, which was first used in 1912.

The maximization of ROA was considered a major corporate goal, and it was realized that ROA was impacted by profitability and efficiency (Liesz, 2002). In this respect, DuPont analysis was incorporated in many companies as a strong measure of a company's performance until the 1970s. Return on assets (ROA) is the average ratio of net profits before tax to total assets. ROA indicates a bank's ability to generate profit from its total assets. The higher the ROA, the more efficiently the resources are used by the financial sector (Adams and Santos, 2005). The calculation of ROA is as follows:  $ROA = \text{net income} / \text{total assets}$ .

Since this study aimed to investigate the determinants of both private and public financial institutions, we have employed ROA to measure financial sector performance. Based on other empirical studies (Ongore and Kusa, 2013; Koju, 2018; Gwachha, 2019), determinants of financial institution performance can be classified into financial institution-specific (internal) and macroeconomic (external) factors. Internal factors are financial institution-specific characteristics that affect financial institution's performance. They are influenced by the decisions of the management and the board strategy. Macroeconomic (external) factors are countrywide factors beyond the control of the management that affect banks' profitability.

## Consequences of financial liberalization

The neoclassical growth model postulates that economic growth is a function of technical progress in the long-run (Solow, 1956). This model could not give room to other factors that may influence growth, for instance, financial development. However, the endogenous growth literature predicts a positive relationship between financial development, real income, and investment (King and Levine, 1993). Well-developed financial markets promote investment and growth by channeling financial resources to the most productive uses.

$$Y_t = AK_t^\alpha$$

Where  $Y_t$  denotes the aggregate output at time  $t$ ,  $K_t$  is the investment at time  $t$ , while  $A$  denotes total factor productivity growth (TFP). Given that TFP is endogenously determined, the endogenous growth literature argues that financial development and bank competition affect growth through capital accumulation and the TFP channel. This channel suggests that an efficient financial system affects growth by facilitating the adoption of modern technology to boost the development of knowledge- and technology-intensive industries.

## 2.5. Empirical Literature

### 2.5.1 *Liberalization and Financial sector's development*

Liberalization in the financial sector affects the host country's financial sector and economy through different channels. Financial globalization may affect the financial sector and economy as a whole by affecting competition, efficiency, and stability in the financial sector. The effects of financial sector globalization and liberalization on these variables were mixed.

Many studies have been conducted on the consequences of financial sector globalization on competition, and the results have been mixed. Jeon et al. (2011) examine the impact of foreign bank penetration on the competitive structure of host country banking sectors in emerging Asia and Latin America from 1997 to 2008. They found that an increase in foreign bank penetration enhances competition (H statistics)<sup>10</sup> in the banking sector of those countries. With a sample of 50 countries, Claessens and Laeven (2004) find that countries with greater a foreign presence

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<sup>10</sup> A measure of the degree of competition in the financial market (<https://fred.stlouisfed.org/tags/series?t=h-statistics>)

and fewer entry restrictions tend to be more competitive. Bremus's (2015) study on the banking industry in OECD countries from 1995 to 2009 found that cross-border lending and bank foreign direct investment reduce bank concentration and increase the contestability of the host countries.

On the other hand, Mulyaningsih et al. (2015) also observed that foreign banks behave more competitively than local banks in the Indonesian banking market, and their penetration is therefore, important in creating a contestable market. In contrast, Yeyati and Micco (2007) examined the impact of the accelerated of foreign penetration in Latin American countries in the 1990s and found that it decreased competition. Moguillansky et al. (2004) argued that foreign bank entry might not stimulate competition because foreign banks adopted rent-seeking strategies in the Mexican market through mergers and acquisitions. This conflicting evidence warrants another study. Jeon et al. (2011) observed that foreign bank penetration only increases banking competition in the host countries when the foreign banks are more efficient and less risky than domestic banks, but not otherwise. Therefore, whether foreign bank entry increases or decreases, financial sector competition has continued as an empirical question.

A series of cross-country empirical studies show that foreign-owned banks are associated with greater efficiency in a host country's banking sector. For example, Claessens et al. (2000, 2001), Claessens and Lee (2003), and Bayraktar and Wang (2004) show that foreign banks play a statistically and economically significant role in improving the efficiency of domestic banks by reducing costs, profits, and net interest margins. Foreign banks are more cost-efficient than domestic banks (Green et al., 2004, 2003). Foreign banks were more cost and profit-efficient than domestic banks, especially state-owned ones (Bonin et al., 2005). Increasing foreign ownership can help improve overall bank efficiency in developing countries through multiple effects. Ghosh (2016) uses a dataset of 169 nations spanning 1998–2013 and found that a greater share of loans from nonresident banks and a greater share of foreign banks reduce both profits and overhead costs in the banking industry of host nations. In a study of foreign bank ownership and bank efficiency in China, Berger et al. (2009) found that foreign banks are the most efficient. Recent evidence indicates that banks with greater (minority) foreign ownership shares and less state ownership are more cost-efficient than others in China (Berger et al., 2009).

On the other hand, other studies found that banking globalization can lower the efficiency of domestic banks. Pruteanu Podpiera et al. (2008) examined the

relationship between bank efficiency and competition in the Czech Republic over the transition period between 1994 and 2005 and found a negative relationship between competition and efficiency in the banking sector. Furthermore, it can take years for the efficiency improvement to be realized, so it is not surprising to see no efficiency gains with foreign bank entry. Yeyati and Micco (2007) examined the impact of foreign penetration in Latin American countries in the 1990s and found that foreign penetration is likely to be associated with lower efficiency in the host country. The conflicting arguments above cannot lead to a clear expectation of the impact of foreign bank presence on host countries' bank efficiency. Therefore, whether foreign bank entry increases or decreases, bank efficiency has continued as an empirical question.

Another strand of studies focuses on the impact of bank globalization on financial stability. Using detailed data on U.S. banks, Cetorelli and Goldberg (2012) found that an active internal capital market in global banks contributes to the international propagation of shocks. Yin (2019), looking at 129 countries from 1995 to 2013, observes increased bank risk in countries that host foreign banks. Chen et al. (2017), studying 32 emerging economies from 2000 to 2013, find that foreign-owned banks take on more risk than their domestic counterparts do. Analyzing bank-level data from 35 emerging countries from 2000 to 2014, Wu et al. (2017) observed that foreign bank presence increases the risk of domestic banks. Findings from recent studies focusing specifically on the recent global financial crisis suggest that global banks were transmitting shocks across borders through their affiliates at the height of the crisis. For example, De Haas and Lelyveld (2014) compared foreign banks with large domestic banks and found that the former group contracted their lending more on average. De Haas et al. (2011) found similar results for a sample of Eastern European countries. Dwumfour (2017) concluded that the presence of foreign banks in the domestic industry reduces stability, which corroborates the fragility view. The presence of foreign banks intensifies the probability of a banking sector crisis and makes the hosting sector fragile (Barth et al., 2004; De Haas and Lelyveld, 2014). However, Zhu and Yang (2016) found that foreign acquisition reduces the risk-taking of state-owned banks in China. Cetorelli and Goldberg (2012) conjecture that global banks can respond to a domestic liquidity shock by activating a cross-border internal capital market between the head office and its foreign offices, thus reallocating funds based on relative needs.

Foreign banks bring higher assets and provide credit to government-owned enterprises, small and medium enterprises, and micro credit. Most developed

countries have understood this phenomenon and have achieved significant financial inclusion by liberalizing their banking industries. It is essential to conceptualize and measure the magnitude of factors, determinants, and antecedents for foreign bank entry promoting financial inclusion (Memon et al., 2021). Foreign banks may create opportunities for new entrepreneurs by ending barriers to entry and enhancing market competition (Zingales, 2003). Copalan (2015) examined the relationship between foreign bank entry and financial inclusion for a panel of 57 emerging and developing economies over 2004 to 2009. The empirical findings suggest that foreign banks positively impact financial inclusion, though the relationship turns negative when foreign bank entry is followed by greater banking concentration.

In contrast, few researchers have found a negative correlation between foreign bank participation and banking sector outreach (Detragiache et al., 2008; Bech et al., 2007; Cull & Peria, 2010). Detragiache et al. (2008) found a negative correlation between foreign bank participation and banking sector outreach using cross-sectional data from 2003 to 2008 for 18 countries. They argue that a decline is observed in loans, deposits, and several branches due to the greater presence of foreign banks in a country. Studies by Bruno and Hauswald (2014) and Beck et al. (2018) found that foreign banks' credit is skewed toward large firms, so their entry will harm financial inclusion.

### **2.5.2 *Financial sector liberalization and economic growth***

The empirical literature on financial liberalization is like a two-sided coin: one side examines the positive relationship between financial liberalization and economic growth (Chang and Mendy, 2012; Özdemir, 2014), while the other side examines whether financial liberalization is responsible for financial fragility (Ahmed, 2013; Philip, 2007) and macroeconomic instability.

Studies in Pakistan showed that the financial liberalization index and economic growth are positively linked in the short run, whereas it is statistically insignificant in the long run (Hye & Wizarat, 2013). In underdeveloped economies like Africa, foreign banks' entry creates financial integration, which increases the finance supply, improves its allocation, and spurs economic growth (Guiso et al. 2004).

Other studies found that the globalization of the financial sector depends on the institution's quality and income level. For example, Akinsola and Odhiambo (2017) found that financial liberalization in sub-Saharan African countries shows a

positive and significant effect on economic growth, but its effect varies based on income level. Moreover, Klein (2005), using panel OLS of 71 countries, found that capital account liberalization on economic growth varies with institutional quality.

In contrast, a study conducted by Ahmed (2013) shows that, on average, financial liberalization is negatively associated with income growth in the SSA region. This finding supported the skeptical empirical view of financial liberalization in emerging markets, which shows that liberalization might be associated with lower economic growth through destabilization, stimulating domestic capital flight, and increasing the risk of financial fragility. However, after controlling key macroeconomic factors such as institutional quality, fiscal imbalances, and inflation, the research found that financial liberalization positively influenced financial deepening and resource mobilization in the SSA region. The study reports a stronger reform effect for countries with stronger legal institutions, protection of property rights and higher human capital.

Some of the previous studies in the case of Ethiopia's financial sector liberalization showed the positive effect of liberalization. For instance, Kiyota (2007) suggested that the Ethiopian economy would benefit from financial sector liberalization, especially from the entry of foreign banks and the associated privatization of state-owned banks, if liberalization were put in place. The study by Sime (2014), using data from 1973-2005, revealed that financial liberalization policy has a positive and statistically significant impact on the development of financial sectors in the long run. However, in the short run, it did not impact the development of financial sectors. The policy implication of the study was that the Ethiopian government should have to speeded the full liberalization of financial sectors to maximize the benefit for the country.

Thus, the literature shows that finance is important for stimulating economic growth and development. However, financial liberalization policies should be implemented with caution, taking into account the sequencing and timing of the policies to avoid endangering financial stability. Indeed, there are still issues relating to the financial liberalization–growth nexus that need to be explored based on the country's context.

### ***2.5.3. Precondition and sequence of financial liberalization***

This international experience over the past 20 years indicates that there are five prerequisites for successful financial liberalization (Fry, 1995): (1) adequate prudential regulation and supervision of commercial banks, implying some

minimal level of accounting and legal infrastructure; (2) a reasonable degree of price stability; (3) fiscal discipline taking the form of a sustainable government-borrowing requirement that avoids inflationary expansion of reserve money by the central bank through direct domestic borrowing either by the government or through the indirect effect of government borrowing that produces surges of capital inflows requiring large purchases of foreign exchange by the central bank to prevent exchange rate appreciation; (4) profit-maximizing, competitive behavior by the commercial banks; and (5) a tax system that does not impose discriminatory explicit or implicit taxes on financial intermediation.

In financial liberalization or integration, countries have chosen alternative paths: some have liberalized their domestic financial markets first, including the banking sector and stock market, or they may have liberalized their capital account first. Related to the order of financial liberalization, each country has its unique experience. Kaminsky and Schmukler (2003) showed that most industrialized countries had liberalized their stock markets first, while most developing countries tended to open their banking sector first.

There is no clear-cut solution to the financial liberalization-sequencing problem in the literature. While some economists claim that the domestic financial sector should be liberalized first, other studies propose that early capital account liberalization can initiate broader economic reforms. The sequence of financial liberalization matters for the performance of the domestic banking sector: After controlling macroeconomic variables and grouping countries by their sequence of liberalization, foreign bank entry has significantly improved domestic bank competitiveness in countries which liberalized their stock market first. In these countries, both profit and cost indicators are negatively related to the share of foreign banks, indicating a more competitive environment. Countries, which liberalized their capital account first, seem to have benefited less from foreign bank entry than the other two sets of countries, as the relationship between the performance indicators and the foreign bank share is the weakest in these countries (Bayraktar and Yan Wang, 2004).

There are many empirical and theoretical studies focusing on the financial liberalization sequence. Kaminsky and Schmukler (2003) established a comprehensive chronology of financial liberalization in 28 developed and emerging economies since 1974. Their study showed that while almost all G-7 countries liberalized their stock markets first, European countries followed a mixed strategy. One-fourth of them deregulated their domestic financial sector first, but most

liberalized their stock markets. Another result is that the liberalization of domestic financial markets occurred before opening capital accounts in developed countries. They report that the order of liberalization was different in developing countries. While Latin American countries first liberalized their domestic financial sectors, East Asian countries implemented a mixed strategy. The liberalization processes that started in stock markets were the ones that completed this process the fastest. They indicated that the order of liberalization does not generally matter in terms of vulnerability to the financial crisis. The exception is that crashes are more severe in developing economies if the capital account is liberalized first.

Johnston et al. (1997) point out three different views on the issue of sequencing financial liberalization. One view claims that capital liberalization requires preconditions such as macroeconomic stability and developing domestic financial institutions and markets before liberalizing the capital account. The second view claims that early capital account liberalization can play an important role in broader economic reforms. The last view is between these two views: capital account liberalization should be a part of overall macroeconomic and structural reform. They indicate that the balances of benefits, costs, and risks of one strategy versus another may vary across countries.

Moreover, Johnston (1998) investigated the relationship between financial sector reform and capital account liberalization. He showed that before opening capital accounts, the financial intermediaries needed to be strengthened to guarantee the efficient use of capital inflows. Countries with weak financial systems may need time to develop financial institutions and markets, especially in the banking sector, before liberalizing their capital account.

According to McKinnon (1991), balancing the central government's finances is the first step that should be taken. The second stage is the opening of the domestic capital market. He argued that the last step should be the liberalization of foreign exchange. After controlling for macroeconomic variables and grouping countries by their sequence of liberalization, foreign bank entry has significantly improved domestic bank competitiveness in countries that liberalized their stock markets first (Bayraktar and Yan Wang, 2004).

Finally, the following issues have been summarized from the empirical evidence literature:

Liberalization in the financial sector affects the host country's financial sector and economy through different channels. Financial globalization may affect the financial sector and economy as a whole by affecting competition, efficiency,

and stability in the financial sector. However, the effects of financial sector globalization/liberalization on these variables were mixed.

There is no clear-cut and universal financial liberalization; the sequencing and order of liberalization were different in developing countries depending on their existing macroeconomic situations, but many agreed that macroeconomic stability was a precondition to financial sector liberalization.

In light of the above, this study assesses the constraints, consequences, and policy issues of the liberalization of the Ethiopian financial sector.

### **3. Data and Research Methodology**

#### **3.1. Research design**

Research design shows how all major parts of the research project, samples, sampling techniques, sampling procedures, data collection and analysis tools, and others work together to address the central research questions. Given this, the study adopted a mixed research design to collect quantitative and qualitative data. The qualitative data was used to substantiate the quantitative data. Through a descriptive and inferential research design, variables in the study were described, and their relationships were identified and interpreted.

The objective of this study is to assess the constraints, consequences, and policy issues of the liberalization of the Ethiopian financial sector. To achieve this objective, primary data was collected from the head offices of banks, insurance companies, and microfinance institutions in operation before 2018. Secondary data were collected from the National Bank of Ethiopia, the World Bank, and the International Monetary Fund. Our research analysis approach was predominantly descriptive type and econometric analysis. We attempted to find scientific evidence on the underlying determinants of financial institution performance and the expected costs and benefits of opening the financial sector to foreign operators.

#### **3.2. Population of the study**

The entire financial institutions of Ethiopia, which were well established and started operations before 2018, are the population of this study. At the end of 2018/2020, there were 18 banks (16 private and 2 public), 18 insurance companies (one public and 17 private), and 41 microfinance institutions registered at the National Bank of Ethiopia (with 11 public, 13 private, and 17 NGOs). But out of

the 41 microfinance institutions registered at the NBE, the number of active microfinance institutions during the survey period did not exceed 30. Thus, out of 30, we have considered 19 MFIs (2 public, 1 NGO, and 16 private microfinance institutions) whose head offices are operating in Addis Ababa. Thus, the study population comprised all the above financial institutions operating in Ethiopia and registered by the national bank, including banks, insurance companies, and microfinance institutions, until 2018.

### **3.3. Data collection method**

The study used primary data collected from financial institutions and government organizations operating in the financial sector, including commercial banks, insurance companies, microfinance institutions (MFIs), and the National Bank of Ethiopia (NBE). The primary data was collected from the head offices of financial institutions through a structured questionnaire. This structured questionnaire aimed to examine the key informants' (such as managers and policymakers) perceptions about the consequences of financial institution liberalization for the Ethiopian economy. It also helps us analyze the awareness of the consequences of liberalization of the financial institutions and identify financial institution innovations and financial products in Ethiopia's financial sector.

Secondary data were also used to answer some of the research questions and supplement the primary data. It covers from 1994 -2020 for the banking sector, 1996-2020 for the insurance sector, and 2010-2020 for the microfinance sector. The main sources of the data were the National Bank of Ethiopia, the World Bank Database for the Financial development indicators, and the international Monetary Fund for the financial reform indicators. Thus, both micro and macro data were collected and used to achieve the objectives.

### **3.4. Methods of data analyses**

Two data analysis methods were adopted to enable a more complete and comprehensive analysis. The qualitative analysis helps investigate how incumbent financial institutions perceive the existing financial market and policy, expected competition, gains and losses of opening the financial sector to foreign operators, and the introduction of a secondary financial market. Using qualitative and descriptive analysis, we have explored the relative position of domestic financial

institutions and identified financial sector innovations in Ethiopia's financial industry. Moreover, we have applied econometric analysis to investigate Ethiopia's financial sector competitiveness and the underlying factors determining the performance of financial institutions and to measure the expected effect of financial liberalization policy on financial institutions' performance and the economic growth of Ethiopia. Thus, we have addressed the first two and partly the sixth specific objective by employing econometric techniques. The last five objectives are analyzed through qualitative method and supplemented by descriptive techniques.

### ***3.4.1. Descriptive and qualitative Method***

To elucidate financial operators' perception of the current financial market and policy, assess the relative position of domestic financial institutions to the expected international financial operations; analyze the extent of banking innovations and financial products in Ethiopia's financial sector; and assess the financial operators' awareness level of the consequences of financial market liberalization. Descriptive statistics such as frequency, percentage, the mean, and standard deviation were used. Qualitative analysis has also been complemented with descriptive analysis to find detailed insights into the issues raised by the research questions.

To address the third objective (investigate the relative position of Ethiopian domestic financial institutions to the expected international financial operations), we have used both qualitative analysis and descriptive statistics, such as the mean and standard deviation of financial institutions' performance indicators, to compare the status of domestic financial institution performance in comparison with other countries that have a better position in financial sector development. For this purpose, we used to access bank service, depth of financial development, financial efficiency, banking competition, bank soundness, return on assets, and equity and innovation indices.

To investigate the financial operators' perception of Ethiopia's current financial policy (fourth objective), we collected primary data from financial institutions (banks, insurance companies and microfinance institutions) by using structured survey questions. To address issues under consideration, we contacted the most relevant persons, such as managers. Then, to analyze the collected data, we used qualitative analysis and descriptive statistics.

Finally, to investigate the financial operators' awareness of the consequence of liberalization (the fifth objective), we collected primary data from financial institutions (banks, insurance companies and microfinance institutions) using structured survey questions. To analyze the collected data pertinent to the fifth objective, we used qualitative analysis and descriptive statistics.

### 3.4.2 *Econometrics analysis method*

#### **I. Empirical model for financial sector competitiveness**

The current study has employed Panzar-Rosse (P-R) model to assess the competitiveness of financial institutions in Ethiopia. To assess the nature of competition in financial institutions, various researchers in different countries have adopted the Panzar-Rosse model (Panzar J and Rosse J., 1987). The H-statistic is derived from financial institutions reduced-form revenue equation. The study estimated P-R reduced revenue from the equation, taking the logarithm of total revenue as the dependent variable, which has evaluated the nature of competition in Ethiopia's financial institutions. The independent variables are factor inputs (labor, capital and fund), and financial specific and macro-economic variables (Ombongiand Long, 2018; Tan, 2020). By assuming x-input and single output production function, the reduced-form equation of the P-R model can be written as

$$\ln TR_{it} = \alpha_0 + \sum_{i=1}^i \alpha_i \ln P_{it} + \sum_{i=1}^i \beta_i \ln Q_{it} + \sum_{i=1}^i \gamma_i \ln R_t + \varepsilon_{it} \quad (1)$$

Where: TR= Total Revenue of each bank,  $P_{it}$  are the vectors for factor input prices,  $Q_{it}$  are the vectors for financial institutions' specific variables, and  $R_t$  are the vector of macro-economic variable(s). Ln is the natural logarithm,  $\varepsilon$  is the error term. Panzar J. and Rosse J. (1987) H-statistic (H) value is derived from the sum of price elasticities of factor input prices as shown in equation 2 below, which  $\alpha_i$  denotes unknown input price elasticities.

$$H = \sum_{i=1}^i \alpha_i \quad (2)$$

Then Panzar and Rosse used the sum of input price elasticities (which is represented by H – statistic) to reflect the competitive structure of the market ( $H = \sum \alpha_i$ ) as a necessary condition.

The estimated value of the H-statistic ranges between  $-\infty$  and 1. Rosse and Panzar (1977) show that his negative for a neoclassical monopolist or collusive oligopolistic, between 0 and 1 for a monopolistic competitor, and equal to unity for a competitive price-taking financial sector in long-run competitive equilibrium. Thus, if:

$H \leq 0$ , then the market is characterized by Monopoly

$0 < H < 1$ , then the market is characterized by Monopolistic Competition

$H = 1$ , then the market is characterized by Perfect Competition

Thus, by the same logic we want to test the null hypothesis that  $H_0=0$  and  $H_0=1$  against the alternative hypothesis that  $H_1 \neq 0$  and  $H_1 \neq 1$ .

Since equations; 1 and 2 presents unknown variables, the study further introduces reduce-form revenue equation with known variables as shown in equation 3.

$$\begin{aligned} LnTRTA = \alpha_0 + \alpha_1 LnEET + \alpha_2 LnIETD + \alpha_3 LnOITFA + \beta_1 LnNPLTL + \\ \beta_2 LnTA + \gamma_1 LnGDP + \varepsilon \end{aligned} \quad (3)$$

Where:

Log is the natural logarithm; TRTA is the ratio of total revenue to total assets;  $\alpha_0$  is the coefficient constant; EET is the ratio of total employee expense to total assets; IETD is ratio of total interest expense to total deposits; OITFA is the ratio of operating income to total fixed asset (proxy to depreciation to fixed assets); NPLTL is the ratio of total non-performing loans to total loans, TA is the total assets, GDP is the annual Gross Domestic Product (GDP) growth and  $\varepsilon$  is the random standard error of observation.

EET, IETD, OITFA are vectors for factor input prices for commercial banks in Ethiopia. EET is a measure for the unit price of labour, IETD is a measure for the unit price of funds, and OITFA is a measure for the unit price of capital. NPLTL and TA are the banks' other specific variables that consider the risks encountered and bank size of commercial banks in Ethiopia. GDP is a macroeconomic variable affecting Ethiopia's overall banking sector market. We have estimated the competition model for each financial sector using a similar model with the contextualized variable, as seen in Appendix 1. The variables used for each financial sector, the unit of measurement, the expected sign, and the source of the data are summarized in Appendix 1.

## II. Empirical model for determinants of financial sector performance

We have analyzed the determinants of Ethiopian financial sector performance between the years 1994 - 2020 on an annual basis. The study employed three statistical approaches, fixed effects model (FEM), the random effects model (REM), and the generalized method of moments (GMM), which are suitable for panel data. We have applied the Hausman test to determine whether the FEM or REM model is suitable for research. We formed the following panel regression model based on our theoretical discussion and empirical literature, as follows:

$$\pi_{it} = \alpha + \sum \beta_k x_{it}^n + \varepsilon_{it} \quad (4)$$

Where:  $\pi_{it}$  is the performance of finance institution  $i$  at time  $t$ .  $\alpha$  is a constant term;  $\beta_k$  is the coefficient for the respective variables  $x^n$  for  $k$  explanatory variables and  $\varepsilon_{it}$  is the disturbance with  $v_i$  of the unobserved individual financial institution-specific effect and  $u_{it}$  of the idiosyncratic error or varies over time and entities. The explanatory variables  $x^n$  were grouped into financial institution-specific and macroeconomic variables.

$$\begin{aligned} \ln \pi_{it} = & \alpha + \sum_{i=0}^i \alpha_i \ln FS_{it} + \sum_{i=0}^i \beta_i \ln IS_{it} + \\ & + \sum_{i=0}^i \gamma_i \ln M_t + \varepsilon_{it} \end{aligned} \quad (4)$$

Where;

Where:  $\pi_{it}$  refers to dependent variables (Return on Assets to measure a financial institution's performance).  $FS_{it}$  are the vectors for financial sector-specific variables,  $IS_{it}$  are the vectors for industry (financial industry) specific variables, and  $M_t$  are the vector of macroeconomic variable(s).  $\ln$  is the natural logarithm,  $\varepsilon$  is the error term.  $\alpha$  represent the coefficient of finance institution-specific variables;  $\beta$  represent the coefficient of industry specific variables and  $\gamma$  represents coefficients of the macroeconomic variable.

Most commonly, the following variables are determinants of financial sectors. These include leverage (capital to asset ratio), asset liquidity, size of the financial firm (total asset), assets quality, management efficiency, interest spread, liquidity (ratio of loan to deposit), financial innovations, inflation rate and domestic product growth and the like.

To make the model more specific, the study introduces a reduced-form ROA equation with known variables as shown in Equation 5.

$$\begin{aligned} Ln\pi = & \alpha_0 + \alpha_1 LnCA + \alpha_2 LnAL + \alpha_3 LnTA + \alpha_4 LnAQ + \alpha_5 LnME + \\ & \alpha_6 LnIS + \alpha_7 LnLD + \beta_1 LnFIVATM + \gamma_1 LnINF + \gamma_2 LnGDP + \varepsilon \end{aligned} \quad (5)$$

Using a similar model with the contextualized variable, as seen in Table 2, we have estimated the performance model for each financial sector.

Leverage (equity ratio to total assets) has a negative expected sign on financial sector performance. A financial institution's asset quality (ratio of non-performing loans to total loans) helps the management understand the risk concerning the exposure of the financial sector to borrowers. It is expected to harm financial sector performance (Bilal et al., 2013; Kingu et al., 2018). Management efficiency is the ratio of total operating expenses to total operating incomes at a financial institution. The smaller the ratio, the better the bank's performance (Roman and Sargu, 2013; Liu and Pariyaprasert, 2014). Asset liquidity (ratio of total cash and bank equivalent to customer deposits) measures the ability of the financial institution (bank) to quickly meet its financial obligations arising from unforeseen circumstances that can result in an insolvency risk. It is expected to have positive signs (Dang, 2011). The size of the financial institution represents total assets. The bigger the financial institution's size, the higher the profitability because large financial institutions are more likely to benefit from economies of scale (Hasanov et al., 2018). Interest spread is calculated as the difference between a bank's average yields from loans and the average rate it pays on customers' deposits and borrowing. It is expected to increase financial sector performance (Garo, 2013). Financial innovation (number of mobile subscribers or ATMs) is expected to have positive signs (Dongol, 2021) because mobile subscribers can use mobile banking and internet-banking services, which satisfy customers and increase the financial sector's performance. Ownership type, 1 if the private sector owns it, 0 if it is state-owned. State-owned financial sectors are believed to have

the least efficient performance (Robin et al., 2018; Shawtari, 2018). Domestic product growth represents the real GDP growth rate, and when a country experiences a high growth rate, the bank's profits are expected to be higher (Michael, 2014; Pradhan; 2016; Topak and Talu, 2017). The inflation rate is expected to positively affect the financial sector's profitability, given that financial institutions revise their pricing accordingly (Athanasoglou et al., 2006). Financial institution development (total bank credit to the private sector) and this variable are expected to positively affect financial institution performance (Garo, 2013). The variables used for each financial sector, a unit of measurement, expected sign, and data source are summarized in Appendix 2.

### **III. Empirical model specification for consequences of financial liberalization**

The last objective, but not the least, of the current study is to examine the costs and benefits associated with the liberalization of the financial sector in Ethiopia. Based on the empirical specifications in Bayraktar and Wang (2008) and including other more relevant variables for Ethiopia, total factor productivity can be examined with the following variables of interest, resulting in:

$$Y_t = AK_t^\alpha. \quad (6)$$

Where  $Y_t$  denotes the aggregate output at time  $t$ ,  $K_t$  is the investment at time  $t$ , while  $A$  denotes total factor productivity growth (TFP). Given that TFP is endogenously determined, the endogenous growth literature argues that financial development and bank competition affect growth through capital accumulation and the TFP channel. This channel suggests that an efficient financial system affects growth by facilitating the adoption of modern technology to boost the development of knowledge-and-technology-intensive industries

$$A = F(Gcf, HCI, FStab, Fc, FLI, Inf, Ef, FivMob) \quad (7)$$

By substituting equation (7) in to equation (8), we obtain

$$Y_t = Gcf_t^{\alpha_1} HCI_t^{\alpha_2} FStab_t^{\alpha_3} FC_t^{\alpha_4} FLI_t^{\alpha_5} Inf_t^{\alpha_6} Ef_t^{\alpha_7} Fivmob_t^{\alpha_8} \quad (8)$$

By log transformation of equation (9), we obtain:

$$\begin{aligned} \ln Y_t = & \alpha_0 + \alpha_1 \ln Gcf_t + \alpha_2 \ln HCI_t + \alpha_3 \ln FStab_t + \alpha_4 \ln FC_t + \\ & \alpha_5 \ln FLI_t + \alpha_6 \ln Inf_t + \alpha_7 \ln Ef_t + \alpha_8 \ln Fivmob_t + F_{i,t} + T_{i,t} + \varepsilon_t \end{aligned} \quad (9)$$

The coefficients  $\alpha_1$ - $\alpha_8$  are elasticities of their respective variables,  $\alpha_0$  is the constant component,  $t$  denotes time,  $\varepsilon$  is the error term and  $T_{i,t}$  is a time-fixed effect. Where,  $Y$ ,  $Gcf$ ,  $HCI$ ,  $FStab$ ,  $FC$ ,  $FLI$ ,  $Inf$ ,  $Ef$ , and  $Fivmob$  represent real gross domestic product per capita, a ratio of gross capital formation to GDP, human capital index, financial stability, financial competition, financial liberalization index (proxied by the deposit interest rate), inflation rate, financial efficiency index and financial innovations which mobile subscribers represent. Financial stability ( $Z$  score= $k+\mu/\sigma$ , where  $k$  is equity capital and reserve as a percent of total assets,  $\mu$  is average net income as a percent of total assets, and  $\sigma$  is the standard deviation of return on assets as an indicator of return volatility) respectively. If the liberalization variable has a positive sign, then benefits should outweigh the costs of financial sector liberalization.

## 4. Discussion and Analysis<sup>11</sup>

### 4.1. The relative position of Ethiopia's financial institution

This section assessed available financial development indicators in Ethiopia and two other countries from the three southern continents (Africa, Asia, and Latin America). In addition, Ethiopia's position has also been compared with that of SSA countries that opened or did not open their financial sectors to foreign operators. For the SSA case, we considered the economic diversity (low income and high income) and the financial sector's globalization. High-income countries were also considered because potential entrants to the Ethiopian financial sector might come from high-income economies. Indicators of financial sector

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<sup>11</sup> A summary of data used for econometric analysis was attached in the appendix section. Thus, the number of observations, mean, standard deviation, minimum and maximum values for variables used for financial sector (bank, insurance and microfinance), determinants of financial sector (bank, insurance and microfinance) performance, and macroeconomic variables were attached in the appendix.

development, such as access, depth, efficiency, profitability, competition, and stability, were reviewed.

#### ***4.1.1. Access to financial institutions in Ethiopia***

We used different indicators to investigate the relative position of Ethiopia's financial access to other countries. Bank branches and ATMs per 100,000 adults, small firms with a bank loan, credit card ownership (% age 15+), digital payments in the past year (% age 15+), utility bills: using a mobile phone (% age 15+), loans requiring collateral (%) are to mention a few. Except for a few indicators, Ethiopia's access to financial products and services remains below the SSA average. For example, in Ethiopia, from 2005 to 2020, there were 1.46 bank branches per 100,000 adults, whereas, in the same period in SSA, there were 6.41 bank branches per 100,000 adults on average. The result was also very low compared to neighboring countries such as Kenya (4.58 branches per 100,000 adults). The result is disappointing compared to the high-income countries' average (87.41 branches per 100,000 adults) in the same period.

Similarly, only 0.13 ATMs provide banking services for 100,000 adults in Ethiopia, less than the SSA average (10.69) and Kenya's (7.58) ATMs per 100,000 adults. Innovations in the banking sector as a means of financial penetration are less widespread in Ethiopia than in other SSA countries and SSA countries and the SSA average. For instance, electronic payments in Ethiopia are 5.27%, and the SSA's average was 21.55%. Thus, financial access in Ethiopia remains low and lower than the African average.

Based on descriptive empirical evidence, bank globalized SSA countries have better banking service access than non-bank-globalized ones. On average (from 2005-to 2019), 21% of adults have access to bank accounts in countries that open their banking sectors to foreign investors. In contrast, only 12% of adults have access to bank accounts in SSA countries, which blocked foreign investors' entry into the banking sector. Moreover, in non-bank globalized SSA countries, only 7.34 ATMs provide banking services for 100,000 adults. However, in globalized countries, about 14.03 ATMs provide banking services for 100 000 adults. More people made digital payments in bank-globalized SSA countries (26.62%) than in non-bank globalized SSA countries (14.47%).

**Table 1: Financial access (2005-2019)**

Country	Bank branches per 100,000 adults	Firms with a bank loan or line of credit (%)	Small firms with a bank loan or line of credit (%)	Saved at a financial institution (% age 15+)	Received wages; into a financial institution account (% age 15+)	Credit card ownership (% age 15+)	Made digital payments in the past year (% age 15)	Paid utility bills; using a mobile phone (% age 15+)	ATMs per 100,000 adults	Loans requiring collateral (%)
Ethiopia	1.46	24.30	16.75	19.96	2.65	0.33	5.27	0.05	0.17	85.55
Botswana	8.67	38.60	30.80	20.34	17.00	9.28	35.92	6.70	31.07	73.75
Kenya	4.58	31.63	25.10	26.75	14.97	5.46	71.32	27.83	7.58	80.50
Indonesia	12.65	22.80	20.90	21.13	7.73	1.51	21.58	1.83	32.35	82.00
South Korea	17.27	.	.	51.65	43.34	58.70	87.04	7.97	260.64	.
Argentina	13.26	43.70	32.00	5.02	16.58	24.16	31.58	1.59	31.62	57.80
Chile	16.18	74.35	68.55	16.18	30.37	26.93	51.72	5.18	54.59	49.00
SSA- G	6.65	22.26	16.76	12.62	8.54	4.03	26.62	5.10	14.03	83.23
SSA –NG	6.16	16.28	12.81	8.83	4.02	2.25	16.47	4.63	7.34	80.98
SSA	6.41	19.27	14.79	10.73	6.28	3.14	21.55	4.87	10.69	82.11
High Income	33.20	47.30	42.51	42.27	46.17	41.99	79.27	8.24	87.41	70.46
Middle Income	14.85	34.68	28.58	13.38	14.63	8.28	28.02	3.05	29.80	78.24
Low Income	2.66	18.73	14.24	7.32	3.52	1.70	15.03	3.06	2.68	85.42

Source: Authors' calculations from World Bank global financial development database, 2022

Note: SSA-G represents bank-globalized Sub-Saharan African countries, and SSA-NG is: Non-bank globalized Sub-Saharan African country.

Overall, Table 1 shows that in all indicators of bank access, Ethiopia's performance was not satisfactory, at least at the SSA standard, and globalized SSA countries have better bank access performance than non-globalized SSA countries.

Thus, the results of the descriptive statistics confirmed that allowing foreign banks entry into the domestic banking sector might improve the penetration of the banking industry in the country. This might be because foreign banks come with financial innovations such as smartphone technology, which is becoming more readily available, especially for the unbanked, as costs fall.

#### ***4.1.2. Depth of financial institutions in Ethiopia***

The depth of financial development indicates how agents can use financial markets for savings and investment decisions and has strong links with long-term economic growth. It enhances the firm's and businesses' ability to invest in long-term and risky initiatives. A common indicator of financial deepening is domestic credit to the private sector as a percentage of GDP. Higher domestic credit to the private sector indicates the provision of productivity-enhancing financial services and high financial deepening (King and Levine, 1993). Other indicators used to measure the depth of the financial sector in the economy are deposit money banks' assets to GDP (%), nonbank financial institutions' assets to GDP (%), financial system deposits to GDP (%), life insurance premium volume to GDP (%), nonlife insurance premium volume to GDP (%), insurance company assets to GDP (%), stock market capitalization to GDP (%), and stock market total value traded to GDP (%).

Table 2 shows, the financial development depth in Ethiopia from 2005-2020 was very poor by any indicator. For instance, on average, from 2005-to 2020, domestic credit to the private sector (percentage of GDP) was about 18.89%, which is less than the SSA's average (21.17%), and it was worse compared to high-income countries (79.27%) and successful countries in financial liberalization such as South Korea (132.76%) and Chile (102.23%) in the same period.

The descriptive evidence for SSA countries shows that countries that open their banking sector to foreign ownership have higher bank service depth than countries that block their banking sector to foreign ownership. In bank-globalized SSA countries, domestic credit to the private sector as a share of GDP was 24.41 percent. On the other hand, in non-bank globalized SSA countries, the share of domestic credit to the private sector in GDP is only 14.90 percent.

**Table 2: Financial Depth**

Country	Deposit money banks' assets to GDP (%)	Nonbank financial institutions' assets to GDP (%)	Financial system deposits to GDP (%)	Life insurance premium volume to GDP (%)	Nonlife insurance premium volume to GDP (%)	Insurance company assets to GDP (%)	Domestic credit to private sector (% of GDP)	Stock market capitalization to GDP (%)	Stock market total value traded to GDP (%)
Ethiopia	28.42	3.80	31.84	0.03	0.46	0.81	18.89	-	-
Botswana	30.56	4.48	42.00	2.14	0.89	16.71	28.53	-	-
Kenya	42.65		36.25	0.90	1.20	6.63	30.55	33.31	2.15
Indonesia	35.80	4.83	34.68	1.04	0.42	3.74	34.97	41.98	11.89
South Korea	118.41	7.22	91.36	6.51	3.96	51.30	132.76	84.86	128.74
Argentina	22.38	0.45	19.69	0.45	1.78	3.47	13.53	13.11	0.89
Chile	77.06	36.65	49.30	2.46	1.28	19.23	102.23	103.04	16.45
SSAG	32.21	23.37	29.65	0.98	0.76	7.53	24.41	63.99	12.74
SSNG	44.20	1.35	34.33	0.32	0.54	2.81	14.90	-	-
SSA	38.205	12.36	31.99	0.65	0.65	5.17	19.655	63.99	12.74
High Income	33.20	47.30	42.51	42.27	46.17	41.99	79.27	8.24	87.41
Middle income	14.85	34.68	28.58	13.38	14.63	8.28	28.02	3.05	29.80
Low Income	2.66	18.73	14.24	7.32	3.52	1.70	15.03	3.06	2.68

Source: Authors' calculations from World Bank global financial development database, 2022. Note: SSA-G represents bank-globalized Sub-Saharan African countries, and SSA-NG is: Non-bank globalized Sub-Saharan African countries.

#### **4.1.3. The efficiency of a financial institution in Ethiopia**

Cost controls and effective resource utilization are central to financial intermediary operations in a competitive environment. While innovations in service delivery through electronic system and consolidation movements in the financial industry are geared toward improving efficiency indicators, there is no consensus on what factors drive financial efficiency (Altunbas and Molyneux, 2001). The

financial efficiency ratio is a quick and easy measure of a bank's ability to turn resources into revenue. The lower (higher) the ratio, the better, and an increase in the efficiency (inefficiency) ratio indicates either increasing costs or decreasing revenues.

Table 3 shows indicators of bank efficiency, such as bank net interest margin (%) and bank overhead costs to total assets (%). These indicators are lower in the Ethiopian banking sector than in SSA countries. The result shows operational efficiency remains relatively satisfactory compared to SSA's average.

Table 3 also shows that all indicators are higher in non-bank globalized SSA countries than in bank-globalized SSA countries from 2005-2020. These results show operational inefficiency to remain relatively higher in non-bank globalized SSA countries than in bank globalized countries.

**Table 3: Efficiency**

<b>Country</b>	<b>Bank net interest margin (%)</b>	<b>Bank lending-deposit spread</b>	<b>Bank overhead costs to total assets (%)</b>
Ethiopia	5.08	3.42	3.53
Botswana	5.22	6.29	3.53
Kenya	8.21	7.78	5.64
Indonesia	5.76	5.02	3.27
South Korea	2.07	1.68	1.68
Argentina	6.58	6.76	6.13
Chile	4.06	3.27	2.45
SSA-G	6.35	10.33	5.44
SSA-NG	7.20	11.16	5.75
SSA	6.78	10.75	5.60
High Income	2.43	4.39	1.92
Middle income	5.35	7.79	4.05
Low Income	6.95	14.22	5.83

Source: Authors' calculations from World Bank global financial development database, 2022

Note: SSA-G represents bank-globalized Sub-Saharan African countries, and SSA-NG is: Non-bank globalized Sub-Saharan African countries.

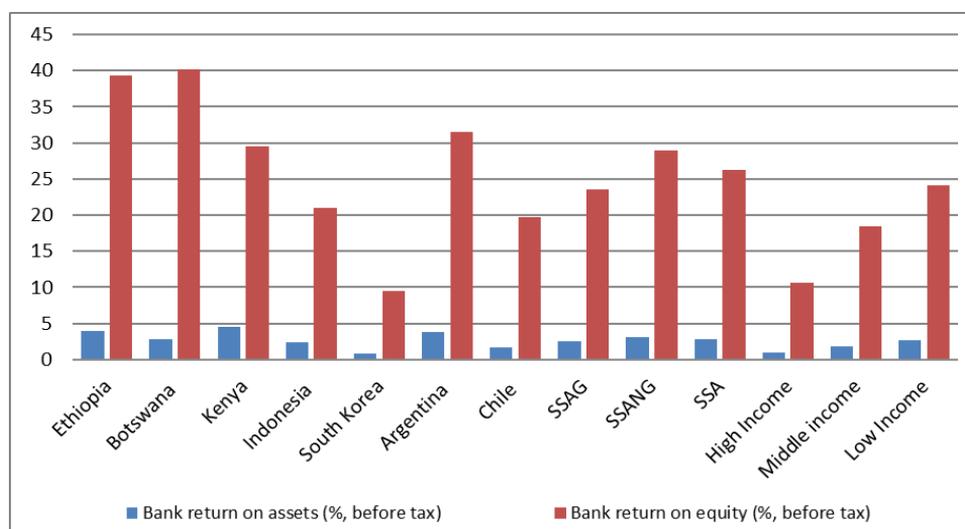
There is also empirical evidence showing a positive effect of foreign bank entry on bank efficiency. To mention a few, Bayraktar and Wang (2004) and Hunegnaw and Adem (2021) indicated that operational efficiency gains from foreign bank entry are higher in the countries that globalized their banking industry than in non-bank globalized countries. However, Hermes and Nhung (2010) revealed that the gains from liberalization were highest for countries that liberalized their stock markets first. The weakest relationship between the performance indicators and the foreign bank share is obtained for the countries which liberalized their capital account first.

#### 4.1.4 Profitability of financial institutions

Bank profitability is proxied by return on assets (ROA) and return on equity (ROE). Figure 1 shows that the Ethiopian banking sector profitability is higher than the SSA average. This study also shows that non-bank globalized SSA countries' profitability is higher than bank-globalized SSA countries' average profitability.

Figure 1 also shows that Ethiopia's rate of return (ROA and ROE) is higher than many higher-income countries' average, which has the potential to come and invest in Ethiopia if our banking system is liberalized. This shows that the opening up of the financial sector will attract many financial institutions to Ethiopia to come and enjoy this higher return.

**Figure 1: Rate of return**



Source: Authors' calculations from World Bank global financial development database, 2022

#### 4.1.5. Stability of financial institutions in Ethiopia

Table 4 indicates Ethiopia's relative position in financial sector stability compared to the SSA countries and advanced economies. Many financial stability indicators in IMF and World Bank databases are missing. This creates doubt about the transparency of the banking sector and management in the Ethiopian financial sector. However, the bank Z-score is the basic indicator of stability used by many scholars, and the assets-to-deposits ratio is available. Using these indicators, Ethiopia has better financial soundness than the SSA average. The Z-score measures the probability of bank insolvency. The higher a bank's Z-score, the lower the bank's insolvency.

**Table 4: Financial sector stability**

	Bank Z-score	Bank nonperforming loans to gross loans (%)	Bank capital to total assets (%)	Bank regulatory capital to risk-weighted assets (%)	Liquid assets to deposits and short-term funding (%)	Provisions to nonperforming loans (%)	Banking crisis dummy (1=banking crisis, 0=none)
Ethiopia	11.98	-	-		38.83	-	0.00
Botswana	6.73	4.23	8.96	19.56	26.13	57.60	0.00
Kenya	20.06	7.45	14.33	19.32	24.05	38.81	0.00
Indonesia	4.09	3.13	12.09	19.83	26.75	54.34	0.00
South Korea	11.26	0.58	7.92	13.95	13.58	70.59	0.00
Argentina	7.35	2.74	12.14	16.16	33.09	130.78	0.00
Chile	8.79	1.81	7.65	13.26	18.22	133.21	0.00
SSAG	14.39	8.43	11.08	18.34	34.64	58.14	0.01
SSNG	14.68	13.02	12.83	20.64	49.45	68.93	0.02
SSA	14.54	10.73	11.96	19.49	42.05	63.54	0.02
High Income	16.51	4.54	8.20	16.26	33.45	58.22	0.08
Middle income	16.97	6.84	11.44	17.77	34.78	78.57	0.01
Low Income	13.02	11.65	12.78	20.83	45.11	64.80	0.01

Source: Authors' calculations from World Bank global financial development database, 2022  
 Note: SSA-G represents bank-globalized Sub-Saharan African countries, and SSA-NG is: Non-bank globalized Sub-Saharan African countries.

Table 4 also indicates that the SSA countries that open their banking sector to foreign investors have better financial soundness than those that do not allow foreign ownership of their banking sector. However, this descriptive result is inconsistent with much empirical evidence on the relationship between foreign bank entry and banking stability. For example, Demirgüç-Kunt and Detragiache (2001) examined the relationship between banking crises and financial liberalization in 53 countries between 1980 and 1995 and found that banking crises were more likely to occur in countries whose financial system was liberalized and the institutional environment was weak. De Haas and Van Lelyveld (2014) and Dwumfour (2017) also argued that the presence of foreign banks intensifies the probability of banking sector crises in host countries.

#### **4.1.6. Banking competition**

Table 5 provides an overview of the competitiveness and ownership structure in the banking industries in Ethiopia relative to the SSA countries and other countries and groups of countries. The 5-bank and 3-bank asset concentration (percentages) capture bank competition. Table 5 shows that Ethiopia's banking environment is more competitive than the SSA countries on average. However, Ethiopia's banking environment is less competitive than the globalized banks of the SSA countries. This might be due to its close-door policy to foreign investors and the very late privatization of the banking industry.

**Table 5: Bank competition**

<b>Country</b>	<b>3-Bank concentration (%)</b>	<b>5-bank assets concentration</b>
Ethiopia	72.28	86.10
Botswana	79.65	96.09
Kenya	50.95	66.96
Indonesia	36.40	48.59
South Korea	67.67	81.99
Argentina	51.04	64.32
Chile	68.92	85.41
SSA	80.44	88.35
SSG	70.96	83.94
SSNG	86.93	92.33
High Income	75.30	84.78
Middle income	67.26	77.64
Low Income	78.05	88.28

Source: Authors' calculations from World Bank global financial development database, 2022

Note: SSA-G represents bank-globalized Sub-Saharan African countries, and SSA-NG is: Non-bank globalized Sub-Saharan African countries.

Banking system in most SSA countries is characterized by high concentration, as measured by the share of banking assets held by the five largest banks. Table 5 shows that bank-globalized SSA countries have lower asset concentration among the top 5 banks than the non-globalized SSA countries. On average, the asset concentration among the top 5 banks in the non-globalized SSA countries is 86.93%. From this result, we can conclude that foreign bank presence increases bank competition in the SSA countries' banking sector, but we need to take caution here. Perhaps, other regional differences (for example, general development and regulations) influence the effect of foreign presence and asset concentration on competitiveness and efficiency, as hinted by Claessens and Horen (2014).

Generally, as shown in Table 6, the overall performance of Ethiopia's financial sector was not satisfactory during the 2005-2020 periods, at least compared to the African average. The result is worst compared to advanced markets. Moreover, bank-globalized SSA countries' overall financial performance was better than non-bank globalized ones.

**Table 6: Overall financial sector development**

Country	FD Index	FI Access	FI Depth	FI Efficiency	FI Index	FM Access	FM Depth	FM Efficiency	FM Index
Ethiopia	0.11	0.02	0.05	0.73	0.21	0.00	0.02		0.01
LIC	0.12	0.11	0.07	0.51	0.21	0.01	0.04	0.01	0.02
Adv. Market	0.59	0.63	0.58	0.63	0.67	0.47	0.49	0.49	0.49
SSAG	0.17	0.12	0.14	0.56	0.26	0.15	0.09	0.14	0.07
SSNG	0.10	0.10	0.06	0.46	0.18	0.00	0.04	.	0.01

Source: Authors' calculations from World Bank global financial development database, 2022

Note: SSA-G represents bank-globalized Sub-Saharan African countries, and SSA-NG is: Non-bank globalized Sub-Saharan African countries.

#### **4.2. Ethiopia's financial sector competitiveness**

The current study employed the Panzar-Rosse (P-R) model to assess the nature of competition in the financial institutions. The PR model is only valid if the market is in a long-run equilibrium. This long-run equilibrium was tested using a model in which the dependent variable is the total revenue on assets, and the independent variables are factor inputs (labor, capital, and fund), finance-specific and macro-economic variables.

#### **4.2.1. Banking sector competition**

Various researchers in different countries have adopted the Panzar-Rosse model (Panzar J. and Rosse J., 1987) to assess the nature of competition in banking institutions. This study also employed this model with the dependent variable as the total revenue on assets, and the independent variables are factor inputs (labor, capital, and fund), financial specific and macro-economic variables.

The Hausman test was conducted to estimate H-statistic, fixed, and random effect econometric estimations. The fixed-effects model was rejected in favor of the random-effects model. Thus, we applied the random effect to analyze bank competition in the Ethiopia's banking industry using the P-R model. To control the endogeneity, omitted variable bias, measurement error, and potential unobserved heterogeneity (Bond et al., 2001), a system of GMM estimators was employed. A System GMM estimator is a dynamic one which estimates the model in first differences and uses lagged values of the variables as instruments. We considered the results the most appropriate and valid in our empirical work. The static models estimated in the analysis utilized data for the whole sample period 1990-2020. However, the dynamic models have been estimated for 2010-2020. The reason for doing so is the problem of too many instruments, as large collections of instruments can overfit endogenous variables (Roodman 2009). The panels in all models were unbalanced due to a lack of data for some years.

The estimates for the coefficient of parameters (input prices) are all statistically significant, and the estimated H-statistic (income price elasticity) is 0.591 and 0.678 using the Random effects model and GMM approaches. GMM results are higher than random effect results; this might be due to improved competition in the Ethiopia's banking industry in later years. The results were consistent with the findings of Eshete et al. (2013), which was 0.629 from 2000-2007. The estimated H-statistic (0.591) also has no significant difference with African level H-statistics (0.54), as estimated by Bikker and Spierdijk (2009).

This study also found that all the three input prices were positive and statistically significant. The dependent variable, the total revenue divided by the total assets is positively related to the price of funds (interest expense), the price of capital (proxied by overhead and operating expenses), and the price of labor (employee salary and other benefits expenses). All factor prices have positive signs, which implies that increased factor prices lead to a higher revenue-to-asset ratio and a higher H-statistic.

**Table 7: Banking competition in Ethiopia**

	Random			Fixed			GMM (2010-2020)		
	Coef.	Std. E	P>t	Coef.	Std. E	P>t	Coef.	Std. E	P>t
EET	0.240	0.030	0.000	0.211	0.039	0.000	0.229	0.113	0.042
IETD	0.257	0.027	0.000	0.246	0.030	0.000	0.360	0.139	0.010
OITFA	0.094	0.008	0.000	0.094	0.009	0.000	0.089	0.017	0.000
NPLTL	-0.027	0.013	0.031	-0.034	0.014	0.014	-0.084	0.072	0.248
GDP	0.031	0.021	0.149	0.023	0.022	0.297	-0.053	0.063	0.399
TA	-0.020	0.007	0.008	-0.010	0.010	0.313	-0.190	0.121	0.116
CONS	-5.042	0.200	0.000	-5.300	0.259	0.000	6.786	7.819	0.385
$H=\alpha_1+\alpha_2 + \alpha_3$		0.591		0.551		0.678			
R square within		0.665		0.677					
R square between		0.812		0.775					
R square overall		0.742		0.724					
Wald chi2(6) (p-value)		456.86(0.00)				200.85(0.00)			
Wald chi2(9) (P-value)						200.85(0.00)			
Prob> Chi2 (P-value)		65.78(0.00)							
Haus. Test -Chi(Prob)		7.08(0.333)							
Sargan Test -Chp(Prob)						4.40(3.55)			
AR(1)-Z(P-value)						-1.198(0.231)			
AR(2) Chi2(Prob)						-0.441(0.659)			
		0.3546(0.00)							
Number of Groups		216		216		90			
Number of observations		16		16		15			
$H=\alpha_1+\alpha_2 + \alpha_3=0$		chi2( 1) = 254.82 Prob =0.0000		F( 1, 197) = 132.17 Prob = 0.0000		chi2( 1) = 36.61 Prob = 0.0000			
$H=\alpha_1+\alpha_2 + \alpha_3=1$		chi2( 1) = 121.78 Prob = 0.0000		F( 1, 197) = 87.63 Prob= 0.0000		chi2( 1) = 8.32 Prob = 0.0039			

Source: authors' calculation based on National Bank of Ethiopia's data, 2022

Where variables such as, EET, IETD, OITFA, NPLTL, GDP, and TA represent employee salary benefits expenses ratio to total assets, interest expense ratio to total deposit, operating income total fixed asset (proxy to depreciation to fixed assets), non-performing loans ratio to total loans, real gross domestic product and total asset respectively.

Note: Because of the absence of data for non-performing loans, less provision for doubtful debts was considered as a proxy to this variable. All variables were transformed into natural logarithms before the estimation.

The first regressor, employee salary and other benefits expenses on total assets (EET) revealed that a high labor cost paid by banks to their employees increases the bank's revenue-generating capacity. This result is consistent with the prior empirical findings of Barros and Mendes (2016), Tan (2016), Tahir et al. (2016), and Rakshit and Bardhan (2020). This empirical evidence elucidated that a higher financial benefit increases employees' morale, dedication, and loyalty to the organization and increases overall efficiency and productivity. This also increases the bank's income. The second regressor interest expense on assets (IETD) showed that the higher funding cost increased the bank's income. This result agrees with the former empirical findings of Neupane (2016), Barros and Mendes (2016); Tan (2016); Tahir et al. (2016); and Rakshit and Bardhan (2020). However, this result conflicts with the past study by Hall and Simper (2013). The third regressor, the ratio of non-interest expenses<sup>12</sup> to total assets as a proxy for the price of physical capital (NETA), has a positive effect on total revenue from assets and is statistically significant.

Control variables such as the ratio of non-performing loans to total loans and total assets negatively explained the total revenue to total assets, which is statistically significant. The result for asset size is consistent with a study by Hamza (2011) and Owusu-Antwi and Antwi (2013), who found a negative relationship between bank assets and revenue generation. Similarly, the sign of a nonperforming loan is consistent with a study by Simpasa (2013) in Zambia, which found a negative and significant relationship. On the other hand, GDP growth is positively related to the H-statistic but not statistically significant. The insignificant positive relationship between GDP and total revenue may imply that it does not matter whether the economy is growing or not. The test for the long-run equilibrium was undertaken using the Wald coefficient restriction test. The null hypotheses on the long-run equilibrium in the Ethiopia's banking sector ( $\alpha_1 + \alpha_2 + \alpha_3 = 0$ ) and  $\alpha_1 + \alpha_2 + \alpha_3 = 1$ ) were tested at the significance level of 5% using the Wald test, and the null hypothesis  $H = 0$  had to be rejected ( $\chi^2(1) = 254.82$  and Prob = 0.000) as well as the hypothesis  $H = 1$  with ( $\chi^2(1) = 121.78$  and Prob = 0.000) using the Wald test. This shows that the banking sector in Ethiopia is neither a monopoly nor perfectly competitive. The Ethiopia's banking sector can; therefore, be described as a monopolistic competition. This study supports Bikker and Haaf (2002), who argued that monopolistic competition is ideal because the sector is prone to product differentiation.

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<sup>12</sup> Sanderson and Roux (2016) used non-interest expenses such as operating and general expenses to total asset ratio as proxy to capital expenses.

The result has an implication for financial sector liberalization policy, for which the Ethiopian government needs to know about the possible consequences of liberalization. For instance, the result shows that all factor prices have positive signs, which indicates that increased factor prices lead to a higher revenue-to-asset ratio and higher H-statistic. The higher the H-statistics, the more competitive the industry is. Thus, the presumption of the banking industry market after liberalization will be fierce competition. Because of this, the current finding indicates that the banking industry needs to spend on the labor with different incentives since higher financial benefit increases employees' morale, dedication, and loyalty to the organization, and increases banks' overall efficiency and productivity. By the same logic, the higher the funding cost and the price of physical capital, the higher the bank's revenue and income. Therefore, this finding is both useful evidence for the current banking industry in Ethiopia to experiment in advance and a foresight signal for the banking industry after liberalization to cope with the fierce competition with the potential entrants.

#### **4.2.2. Insurance sector competition**

As we stated earlier, the PR model is only valid if the market is in a long-run equilibrium. This long-run equilibrium was tested by a model in which the dependent variable is the total revenue on assets, and the independent variables are factor inputs (labor, capital and fund), financial specific and macroeconomic variables. The test for the long-run equilibrium was undertaken using the Wald coefficient restriction test. The null hypotheses on the long-run equilibrium in the Ethiopia's insurance sector ( $\alpha_1 + \alpha_2 + \alpha_3 = 0$ ) and ( $\alpha_1 + \alpha_2 + \alpha_3 = 1$ ) were tested at the significance level of 5% using the Wald test, and the null hypotheses were rejected.

**Table 8: Insurance competition in Ethiopia**

TRTA	Random			Fixed			GMM (2010-2020)		
	Coef.	Std. E	P>t	Coef.	Std. E	P>t	Coef.	Std. E,	P>t
EET	0.191	0.042	0.000	0.185	0.049	0.000	0.110	0.197	0.576
DTFA	0.097	0.024	0.000	0.105	0.025	0.000	0.004	0.082	0.959
GAETA	0.051	0.022	0.019	0.044	0.026	0.093	0.359	0.200	0.073
EC	0.303	0.079	0.000	0.258	0.096	0.009	0.158	0.220	0.474
PE	0.411	0.026	0.000	0.402	0.031	0.000	0.314	0.069	0.000
TA	-0.035	0.022	0.119	-0.026	0.075	0.727	-0.288	0.218	0.187
GDPG	-0.005	0.067	0.935	-0.029	0.024	0.243	0.208	0.119	0.081
OCPC	-0.020	0.034	0.557	-0.020	0.035	0.579	0.041	0.050	0.405
CONS	0.977	0.488	0.045	0.758	0.547	0.171	-3.986	2.812	0.156
$H=\alpha_1+\alpha_2 + \alpha_3$	0.339			0.334			0.474		
R square within		0.826			0.827				
R square between		0.923			0.913				
R square overall		0.865			0.858				
Wald chi2(6) (p-value)		Wald chi2(6) =404.66 with P =0.000			F(8,61) with P=0.000			Wald chi2(9) = 36.54 with P=0.000)	
Haus. Test - Chi(Prob)								2.55((0.959)	
Sargan Test – Ch(Prob)								Chi2(11) = 14.72888 Prob> = 0.1952	
Walid Test								Wald chi2(9) = 176.18 Prob> = 0.0000	
Number of Groups								8	
Number of observations								43	
$H=\alpha_1+\alpha_2 + \alpha_3=0$		chi2(1) = 54.45 Prob> chi2 = 0.000			F(1, 61) = 41.67 Prob> F = 0.0000			chi2(1) = 33.79 Prob> chi2 = 0.000	
$H=\alpha_1+\alpha_2 + \alpha_3=1$		hi2(1) = 205.98 Prob> chi2 = 0.0000			F(1, 61) = 166.04 Prob> F = 0.0000			chi2(1) = 34.43 Prob> chi2 = 0.000	

Source: author's calculation based on National Bank of Ethiopia's Data, 2022

Where variables TRTA, EET, DTFA, GAETA, EC, PE, TA, GDPG and OCPC represent total income to total assets, employee salary and benefits expenses, depreciation expenses to total fixed assets, and general and administrative expenses to total assets as a proxy for interest expenses, Paid-up capital to total asset, net profit after tax to total paid-up capital, total assets, GDP growth and OCPC=Outstanding claim to total paid-up capital respectively. All variables were transformed into natural logarithms before the estimation.

Our regression model, Panzar-Rosse's H-statistic, is given by  $H = \alpha_1 + \alpha_2 + \alpha_3$ . These coefficients are estimated using a fixed-effect panel procedure. This approach was preferred based on the Hausman test result. Additionally, a system GMM model was applied to assess the robustness of the results. However, the results of GMM were not good due to small observations. Panzar-Rosse's E-statistic estimation for the Ethiopian insurance industry was based on annual balance sheet data from the insurance companies. The data covers the period 1996-2020 and includes 17 insurance companies in the general insurance sector. However, our system's GMM panel includes only eight companies due to missing or non-meaningful values for some variables. The panel is unbalanced due to a lack of data for some years.

The estimates for the coefficients of parameters are all statistically significant, and the estimated H-statistic (income price elasticities) is 0.334 and 0.474 using the fixed effects and system GMM approaches, respectively. The outcomes of the reduced-form revenue model showed that the input prices were positively and significantly associated with the total revenue on assets. In each model, we performed Wald tests to check whether the estimated H-statistic is different from zero and unity. In all the three models, the H-value differs significantly from zero and unity (at the 1% level). These results suggest that the insurance market structure differed from a perfect competition and a monopoly during the period under consideration. The firm-specific control variable, total asset-firm size (TA) has a negative sign but is not statistically significant. The macro-economic variable, real GDP growth, was negative but not statistically significant in the fixed effect model, but the result was positive and statistically significant in the GMM result.

The result of the insurance industry reveals similar characteristics with the banking industry and has similar implications for the financial sector's liberalization policy. The result shows that the insurance industry's market is a monopolistic competitive (H-statistics 0.334), and the input prices have a positive and significant influence on the insurance industry's total revenue to assets ratio. Therefore, this finding is useful evidence for the current insurance industry in Ethiopia to exercise competition in advance, prepare, and know what to do during financial sector liberalization to cope with the fierce competition with the potential entrants.

### 4.2.3. *Microfinance sector Competition*

This study also investigated the extent of the competition in the microfinance sector as part of a financial institution applying the Panzar-Rosse (P-R) model. The data covers the period 2010-2020 and includes 38 MFIs. Many empirical studies (for instance, Shaffer, 1982) and Kar and Swain (2018), used return on assets as a dependent variable instead of total revenue.

Our regression model of long run equilibrium is given by  $E = \alpha_1 + \alpha_2 + \alpha_3$ . These coefficients are estimated using a random-effects panel procedure. This approach was preferred based on the Hausman test result. Additionally, the system GMM Model was applied to assess the robustness of the results.

Where, Pl is the price of labour, and its proxy is the ratio of personnel expenses to total assets, the price of funds, Pf, is measured as the ratio of interest expenses to total deposits, and price of physical capital, Pk, is defined as the ratio of depreciation and administrative expenses to the total assets. Ca represents capitalization MFIs; its proxy is capital-assets-ratio; and La represents the outstanding loan to total assets ratio. The loans-to-assets ratio is used as a control variable for their business and portfolio mix. To control for the potential effects of an MFI's size, we include  $Size_{it}$ , the total assets and GDP to control macroeconomic effects.

Thus, both static and dynamic revenue tests consistently confirmed the validity of the methodology we applied and acted as an additional tool for robustness checks. This shows that the microfinance sector in Ethiopia is neither a monopoly nor perfectly competitive. Thus, the Ethiopian microfinance sector can also be described as monopolistic competition since the H-statistic is between 0 and 1. However, there is scope to make these markets more competitive by creating a more conducive atmosphere for the participation of other MFIs and reducing unnecessary restrictions on their activities. Caution must be maintained, as promoting competition may not improve the incumbent socially motivated MFI's financial sustainability and outreach performance and may result in mission drift concerns. The competitive microfinance industry may not guarantee the better performance of an MFI, whereas the monopoly of an altruistic MFI can be good for its clients. Owing to competitive pressures, MFIs cannot always pass an increase in input prices on to their clients. Achieving financial sustainability and balancing it with higher outreach are ongoing challenges for MFIs, and they must improve their efficiency by reducing costs.

Where Pl is the price of Labour, and its proxy is the ratio of personnel expenses to total assets; the price of funds, Pf, is measured as the ratio of interest

expenses to total deposits; and the price of physical capital,  $P_k$ , is defined as the ratio of depreciation and administrative expenses to total assets.  $C_a$  represents capitalization MFIs; its proxy is capital-assets-ratio; and  $L_a$  represents the outstanding loan to total assets ratio. The loans-to-assets ratio is used as a control variable for their business and portfolio mix. To control for the potential effects of an MFI's size, we include  $Size_{it}$ , the total assets and GDP to control macroeconomic effects.

Thus, both static and dynamic revenue tests consistently confirmed the validity of the methodology we applied and acted as an additional tool for robustness checks. This shows that the microfinance sector in Ethiopia is neither a monopoly nor perfectly competitive. Thus, the Ethiopian microfinance sector can also be described as having monopolistic competition since the H-statistic is between 0 and 1. However, there is scope to make these markets more competitive by creating a more conducive atmosphere for the participation of other MFIs and reducing unnecessary restrictions on their activities. Caution must be maintained, as promoting competition may not improve the incumbent socially motivated MFI's financial sustainability and outreach performance and may result in mission drift concerns. The competitive microfinance industry may not guarantee the better performance of an MFI, whereas the monopoly of an altruistic MFI can be good for its clients. Owing to competitive pressures, MFIs cannot always pass an increase in input prices on their clients. Achieving financial sustainability and balancing it with higher outreach are ongoing challenges for MFIs, and they must improve their efficiency by reducing costs.

Where  $P_l$  is the price of labour and its proxy is the ratio of personnel expenses to total assets; the price of funds,  $P_f$ , is measured as the ratio of interest expenses to total deposits; and price of physical capital,  $P_k$ , is defined as the ratio of depreciation and administrative expenses to total assets.  $C_a$  represents capitalization MFIs, its proxy is capital-assets-ratio, and  $L_a$  represents the outstanding loan to total assets ratio. The loans-to-assets ratio is used as a control variable for their business and portfolio mix. To control for the potential effects of an MFI's size, we include  $Size_{it}$ , the total assets and GDP to control macroeconomic effects.

**Table 9: Microfinance competition in Ethiopia**

ROA	Random			Fixed			GMM (2010-2020)		
	Coef.	Std. E	P>t	Coef.	Std. E	P>t	Coef.	Std. E	P>t
Pf	-0.054	0.038	0.161	-0.121	0.046	0.010	-0.052	0.083	0.529
Pl	-0.174	0.050	0.000	-0.236	0.056	0.000	-0.162	0.046	0.000
Pk	-0.016	0.018	0.384	-0.023	0.018	0.216	0.003	0.014	0.846
Ca	0.182	0.065	0.005	0.257	0.072	0.001	-0.080	0.090	0.375
L	0.251	0.072	0.001	0.165	0.079	0.040	0.207	0.113	0.067
Size	0.047	0.021	0.022	0.089	0.032	0.006	-0.008	0.029	0.773
GDP	0.115	0.101	0.256	0.086	0.113	0.446	-0.019	0.071	0.794
Con	-0.499	0.161	0.002	-0.845	0.253	0.001	-0.229	0.199	0.250
$E=\alpha_1+\alpha_2 + \alpha_3$		-0.244			-0.38			-0.211	
R square within			0.321			0.3578			
R square between			0.282			0.1544			
R square overall			0.138			0.0677			
			Wald chi2(7) = 62.35		F(7,114) 9.07		Wald chi2(9) = 926.15		
			Prob> chi2 = 0.000		Pob = 0.000		Prob> chi2 = 0.000		
Haus. Test	-		chi2(7) = 11.18						
Chi(Prob)			Prob>chi2 = 0.131						
Sargan Test	-						chi2(6) = 6.918382		
Chp(Prob)							Prob> chi2 = 0.3285		
AR(1)-Z-(P-value)							-1.9421	0.0521	
AR(2)							-.82702	0.4082	
Chi2(Prob) =									
Number of Groups			32			32			23
Number of observation:			153			153			86
$H=\alpha_1+\alpha_2 + \alpha_3=0$			chi2(1) = 17.38		F(1, 114) = 33.20		chi2(1) = 5.33		
			Prob> chi2 = 0.000		Prob> F = 0.000		Prob> chi2 = 0.021		
$H=\alpha_1+\alpha_2 + \alpha_3=1$			chi2(1) = 453.21		F(1, 114) = 437.31		chi2(1) = 174.96		
			Prob> chi2 = 0.000		Prob> F = 0.000		Prob> chi2 = 0.000		

Source: authors' calculation based on National Bank of Ethiopia's Data, 2022

Where Pl is the Price of Labour, and its proxy is the ratio of personnel expenses to total assets; price of funds, Pf, is measured as the ratio of interest expenses to total deposits; and price of physical capital, Pk, is defined as the ratio of depreciation and administrative expenses to total assets. Ca represents the capitalization of MFIs, its proxy is capital-assets-ratio, and L- represents the outstanding loan-to-total assets ratio (a proxy for Loans-to-assets ratio) and is used as a control variable for their business and portfolio mix. To control for potential effects of MFI's size, we include  $Size_{it}$ , that is, the total assets and GDP to control macroeconomic effect. All variables were transformed into natural logarithms before the estimation.

Table 9 shows that the coefficients on the proxies for the input prices are negative and statistically significant for the MFI in Ethiopia. The result is consistent with a study by Kar and Swain (2018) for Indonesia and Peru. Negative and significant coefficients indicate the presence of excess capacity in Ethiopia's microfinance industries. As Bikker, Shaffer, and Spierdijk (2009) explained, a negative H-statistic may also arise under long-run competition with a constant average cost and short-run competition. The negative coefficients of the input prices increased factor costs, leading to lower returns on assets. This could also indicate cost-cutting efforts by MFIs.

Table 9 also shows the coefficients of the control variables. The effects of the loan-to-assets ratio and total assets on the return on assets were positive. These results confirmed the positive effects of MFI size (economies of scale) on the return on assets and the positive effect of the capitalization (capital to total assets ratio) variable (though statistically insignificant) for the MFIs in Ethiopia. The results indicate that improved capitalization and asset size may raise the return on assets.

The null hypotheses on the long-run equilibrium in the Ethiopian MFI sector ( $\alpha_1 + \alpha_2 + \alpha_3 = 0$ ) and  $\alpha_1 + \alpha_2 + \alpha_3 = 1$ ) were tested and rejected using the Wald test and significant at the significance level of 5 %. Instead,  $\alpha_1 + \alpha_2 + \alpha_3 = -0.244$  for random effect and  $-0.22$  at GMM model estimation. The null hypothesis  $H = 0$  had to be rejected ( $\chi^2(1) = 17.38$  and  $\text{Prob} = 0.000$ ) as well as the hypothesis  $H = 1$  with ( $\chi^2(1) = 453.21$  and  $\text{Prob} = 0.000$ ) using the Wald test.

The Ethiopian microfinance sector can also be described as having monopolistic competition since the H-statistic is between 0 and 1. The coefficients on the proxies for the input prices are negative and statistically significant for the MFI in Ethiopia, showing the presence of excess capacity in Ethiopia's microfinance industries. Thus, there is scope to make these markets more competitive by creating a more conducive atmosphere for the participation of other MFIs and reducing unnecessary restrictions on their activities. Since microfinance has dual objectives and promoting competition may not improve the incumbent socially motivated MFI's financial sustainability and outreach performance, there shall be a cautionary effort that could work for both purposes. Thus, the result implies that the existing microfinance institutions must improve their efficiency by reducing costs and getting prepared for the possible fierce competition after liberalization.

### **4.3. Determinants of Ethiopia's financial sector performance**

This section analyzes the determinants of the financial sector, including financial sector competition (an indirect proxy for financial liberalization).

#### ***4.3.1. Determinants of banking sector performance***

According to Chris Brooks (2008), if the p-value for the Hausman test is less than 1%, the random-effects model is inappropriate, and the fixed-effects specification is preferred. Based on this fact, the p-value for the Hausman test was 0.000, i.e., less than 1%, so a running fixed effect model is appropriate. The fixed-effect model suggested that bank-specific variables such as asset liquidity (AL), asset quality (AQ), and loan-to-deposit ratio (LD) are found to be positive and statistically significant, while leverage ratio (Leb) and management efficiency have a negative sign and are statistically significant.

Table 10 shows that the leverage ratio (equity to total assets) has a negative effect on the bank's rate of return. It is one of the bank-specific factors that influences bank profitability. As revealed in an interview with NBE management members, Ethiopia has been working to introduce Basel III before globalizing the banking sector. Basel III established a 3% minimum requirement for the leverage ratio while opening the possibility of systematically increasing that threshold for important financial institutions. This shows that the introduction of Basel III may reduce the bank's return through the leverage threshold effect.

The bank's management or operational efficiency, measured by the general expense ratio to net income, has a negative effect on ROA and is statistically significant. The negative sign of the ME variable shows the negative relationship between operational inefficiency (cost-income ratio) and the performance of Ethiopian commercial banks. The result of the study implies that more operationally efficient commercial banks reported higher profits than those commercial banks that had poor expense management over the study period. Therefore, one factor that negatively affects the banks' profitability is the failure of management to control costs. The result of the study is consistent with Pasiouras and Kosmidou (2007) and Kosmidou (2008), among others. This management efficiency implies liberalization; hence, international banks will come with high management efficiency, and domestic banks shall improve their management efficiency to overcome strife competition from international banks.

**Table 10: Determinants of banking sector performance**

ROA	Random			Fixed			GMM (2010-2020)		
	Coef.	Std. E	P>t	Coef.	Std. E	P>t	Coef.	Std. E	P>t
CA	0.018	0.158	0.910	-0.471	0.176	0.008	-1.857	1.740	0.286
AL	0.228	0.156	0.145	0.353	0.153	0.023	0.330	0.428	0.441
TA	-0.030	0.067	0.652	-0.009	0.101	0.927	-0.104	0.226	0.646
AQ	0.035	0.066	0.601	0.008	0.081	0.920	0.397	0.203	0.050
ME	-0.345	0.126	0.006	-0.332	0.137	0.017	-0.008	0.252	0.973
IS	-0.043	0.064	0.499	0.132	0.086	0.126	0.139	0.283	0.623
LD	0.617	0.255	0.016	0.694	0.297	0.021	0.717	1.161	0.537
Fivatm	0.265	0.059	0.000	0.258	0.088	0.004	0.357	0.225	0.113
Inf	0.060	0.053	0.251	0.090	0.050	0.075	0.056	0.045	0.213
Gdpg	0.523	0.270	0.052	0.776	0.298	0.010	0.512	0.267	0.055
Cons	-1.087	1.452	0.454	-5.719	1.994	0.005	-12.242	10.361	0.237
R square within		0.133		0.202					
R square between		0.108		0.366					
R square overall		0.141		0.030					
Wald chi2(10) =27.68			F(10,161) = 4.07			Wald chi2(12) = 55.07			
Prob = 0.002			Prob = 0.000			Prob = 0.0000			
Haus. Test									
-Chi(Prob)			50.11 (0.000)						
Sargan Test –									
Chp(Prob							1.212(1.000)		
Number of		15		15		27			
Groups									
Number of		186		186		156			
observations									

Source: authors' calculation based on National Bank of Ethiopia's Data, 2022

Where variables CA, AL, TA, AQ, ME, IS, LD, Fivatm, Inf, GDPg represent leverage (equity to total asset), asset liquidity (liquid asset to totals asset), management efficiency (ratio of general expenses to total assets), interest spread, loan to total deposit ratio, mobile subscribers per 100,000 adults, inflation and real GDP growth respectively. All variables were transformed into natural logarithms before the estimation.

Table 10 also shows that the loan-to-deposit ratio positively affects the profitability of banking firms in Ethiopia. Loans are the most important indicators

of the bank's performance in its financial statements because they reflect its primary activity. Assuming, other variables are constant; the higher the rate of transforming deposits into loans, the higher the profitability. A positive relationship between the loan deposit ratio and the bank's profitability is expected. The bank with the higher loan-to-deposit ratio (which indicates lower liquidity) may have a higher performance. This finding differs from previous studies, which found a negative correlation between liquidity and bank performance (Elyor, 2009; Jha and Hui, 2012; Liu and Pariyaprasert, 2014). The interest spread used as a proxy for banking liberalization positively affects banking sector performance but is not statistically significant. It is known that when the banking sector is globalized, interest rate spreads will decrease, so it may have a negative effect on the banking sector's performance in Ethiopia, but it is difficult to conclude because it was found to be statistically insignificant.

Similarly, GDP growth, ATMs per 100,000 adults (five ATMs) and inflation have positive and statistically significant effects on the ROA of a bank. GDP growth varies over time but not among the banks. GDP growth is expected to positively impact bank profitability (Bikker, and Bos, 2006; Athanasoglou et al., 2006) because bank profitability increases when GDP rises as the demand for lending increases. Additionally, a growing economy enables businesses to operate more efficiently. GDP, in particular, has a significant positive effect on banks' performance (Emase, 2017; Matar et al., 2018; Tahsin & Gülşah, 2018). Inflation is also a macroeconomic variable that positively affects a bank's performance. This conclusion is consistent with many empirical studies (Miguel et al., 2018; Gilbert and Jaya, 2019; and Almansour et al., 2021).

This result has an important implication for financial sector liberalization policy, for which the Ethiopian government needs to know the possible consequences of liberalization. The empirical results showed that firm characteristics, industry-specific variables, and macroeconomic variables were determinants of financial performance. In contrast, leverage (Leb), asset liquidity (AL), management efficiency (ME), loan-to-asset ratio, ATM per 100 000 adults, inflation, and GDP growth were found to be the main determinants of the banking sector in Ethiopia, while total asset (TA), asset quality (AQ), and interest rate spread were factors that did not affect the sector's performance. For instance, operational efficiency leads to an increase in profit in the banking industry; a higher loan-to-deposit ratio positively affects the profitability of banking firms; and financial innovation improves banking performance. In addition, the interest spread

used as a proxy for banking liberalization positively affects banking sector performance. Thus, by paying more attention to firm-specific variables and macroeconomic dynamics, the banking industry can outperform and resist potential entrants due to liberalization policy.

#### **4.3.2. *Determinants of insurance sector performance***

In this study, we used a model that studied the effect of specific variables of a firm (age, size, leverage, liquidity, tangibility, managerial efficiency, investment to asset ratio, growth of firm) and the macroeconomic variable real GDP on the performance of the Ethiopian insurance sector. This study focused on seventeen insurance companies for a period (from 1996-2020). The study used ROA ratio (return on assets) as a measure of performance that will be regressed in terms of the explanatory variables. This model was adopted by Derbali (2014). Fixed effects and random effects econometric models for panel data were applied to examine the impact of the independent variable on the dependent variable. To identify the appropriate model for study, we have conducted a Hausman test against the hypotheses: H0: A random-effect model is appropriate and H1: A fixed-effect model is appropriate.

As shown in Table 11, the Hausman specification test for this study has a p-value of 0.456 for the regression models. This indicates that the p-value is not significant, and then the null hypothesis is not rejected, justifying a random effect model as appropriate for the given data set in this study. Table 11 shows the results of the independent variables from the random effect regression model, and the overall model is significant (P-value = 0.000) with an adjusted R<sup>2</sup> of about 37.8%. This indicates that the explanatory variables explain about 37.8 percent of the insurance sector's financial performance variation.

Random results show that about seven of the independent variables, like the firm's age, leverage of the firm, liquidity of the firm, tangibility, management efficiency, and investment-to-assets ratio, have a significant effect on the performance of an insurance company. Furthermore, the study's main findings regarding the factors that affect the financial performance of insurance companies are discussed below.

As the above result shows, the coefficient of the leverage ratio is negative (-1.724) and statistically significant. Leverage is measured by the debt-to-equity ratio and considers the firm's capital structure and the evaluation of the relative risk and return associated with long-term debt and equity. The result shows a significant

and negative association between leverage and ROA. This implies that, holding all other factors constant, a 1% increase in the leverage of insurance firms in Ethiopia led to, on average, a 1.724% fall in their financial performance. The result is consistent with prior studies such as Suheyli (2015), Meaza (2014), Mirie M. and Jane W (2015), Andres and Stephen (2013), and Nikhel B. et al. (2015).

**Table 11: Determinants of insurance sector performance (ROA)**

ROA	Random			Fixed			GMM (2010-2020)		
	Coef.	Std. E	P>t	Coef.	Std. E	P>t	Coef.	Std. E	P>t
LnAge	-0.409	0.108	0.000	-0.310	0.205	0.134	-0.715	0.974	0.463
LnSize	0.336	0.084	0.000	0.248	0.124	0.050	0.398	0.312	0.203
LnLeverage	-1.724	0.424	0.000	-1.694	0.491	0.001	-1.435	0.902	0.112
Lnliquidity	0.991	0.295	0.001	0.917	0.314	0.005	0.746	0.596	0.211
TA	-0.279	0.088	0.002	-0.217	0.103	0.039	-0.358	0.265	0.177
ME	-0.116	0.052	0.025	-0.128	0.066	0.058	-0.883	0.189	0.000
LnIV	-0.169	0.046	0.000	-0.173	0.057	0.003	-0.051	0.062	0.411
LnGF	0.005	0.056	0.930	0.066	0.061	0.285	-0.048	0.058	0.407
LnGDP	0.016	0.213	0.939	0.067	0.222	0.763	0.177	0.209	0.395
Cons	-9.857	1.599	0.000	-8.215	2.086	0.000	-12.732	4.110	0.002
R square within	0.378			0.390					
R square between	0.625			0.461					
R square overall	0.332			0.265					
	Wald chi2(9) = 56.32			F(9,77) = 5.47			Vald chi2(11) = 67.97		
	Prob= 0.0000			Prob =0.0000			Prob = 0.0000		
Haus. Test -Chi(Prob)	chi2(9) = 8.80								
	Prob = 0.456								
Sargan Test -Chp(Prob)							chi2(12) = 15.14788		
							Prob = 0.2334		
Number of Groups	17			32			7		
Number of observations	196			153			42		

Source: authors' calculation based on National Bank of Ethiopia's Data, 2022

Where leverage, liquidity, TA-tangibility, ME-management efficiency, IV-investment to assets ratio, GF-growth of the insurance firm, GDP-Gross domestic product. Ratios can be calculated as ROA=Net profit before tax/Total Asset, ME= administrative and general expense/total income; leverage = total debt/total asset; liquidity=current asset/current liability; tangibility= total fixed asset/total asset; size=total asset. All variables were transformed into natural logarithms before the estimation.

Table 11 also depicts that the coefficient of liquidities measured by current assets to current liability is 0.991, and the p-value is significant. There is a significant positive relationship between Ethiopian insurance companies' liquidity and return on assets (ROA). The result is consistent with previous studies: Hadush (2015), Hana (2012), Mirie and Jane (2015), Behaylu (2017), and Suheyli (2015), which the liquidity ratio has a positive relationship with the financial performance and profitability of firms. When the firm's liquidity improves, its financial performance will also improve.

The coefficient of real GDP of 0.016 was positive, but it was not statistically significant, with a p-value of 0.939. As far as economic growth is concerned, several studies have tried to measure its influence on insurance companies' profitability; for instance, Meaza (2014), Hana (2015), Mister (2015), and Teklit and Jasmindeep (2016), which showed that GDP has a positive but insignificant relationship with ROA, which is a proxy for profitability.

The regression coefficient of management efficiency (administrative and general expenses/total income) was 0.116 with a p-value of 0.025. The result suggested a negative and significant relationship between ROA and management efficiency. This means managerial efficiency greatly improves the financial performance of insurance companies in Ethiopia. The result suggested that insurance companies should focus on the competency of the management team. When the capabilities of the management team increase, it leads to the company's performance increasing. This may be due to professional help from the insurance company in managing risks, finding and creating investment options, efficient use of resources, and working capital management. The result is similar to Almajali's (2012) and Wangugu's (2012) findings, indicating that management competency strongly influences profitability.

The coefficient of growth of the firm was positive 0.005 and statistically insignificant, with a p-value of 0.930, which is above 5%. The coefficient of investment ratio is -0.169 and statistically significant at a 5% significance level with a p-value of 0.025, lower than 0.05. The results show that the coefficient on size (scale) is positive (0.336). Company size is computed as the natural logarithm of the insurance company's total assets. The regression result of the study revealed that there are significant and positive relationships. Thus, large insurance companies in Ethiopia are more efficient than smaller ones. The result was consistent with other prior studies such as Suheyli (2015), Bahailu (2016), and Burca and Batrinca (2014). In contrast, the coefficient on age is negative (-0.409).

Thus, younger insurance companies in Ethiopia are more efficient than those of older ages.

With regard to the insurance industry, the finding has some implications for financial sector liberalization policy. For instance, the results show that managerial efficiency greatly improves the financial performance of insurance companies in Ethiopia. Thus, with the presumption that the insurance industry will face tough competition when the sector is opened up to the rest of the world, in order to cope with the shock, the domestic insurance industry needs to work on operational efficiency in advance. When the capabilities of the management team increase, it leads to the company's performance increasing. Regarding leverage, the insurance industry needs to properly handle the debt-to-equity ratio, consider the firm's capital structure, and evaluate the relative risk and return associated with long-term debt and equity. So, the insurance industry can perform better in the liberalized financial sector.

#### **4.3.3. *Determinants of MFIs' performance***

This study sought to establish the determinants of the financial performance of microfinance institutions in Ethiopia. Therefore, the study employed the Ngumo et al. (2020) equation to examine the determinants of the financial performance of MFIs in Ethiopia. The study used the ROA (return on asset) as a measure of performance that will be regressed in terms of the explanatory variables. Independent variables include capital adequacy (CA), equity to total assets (ETA), asset quality (AQ), liquidity ratio to total assets (LTA), total asset (TA), management efficiency (ME), interest spread (IS), gross domestic product growth (GDPg), ownership (Owner), and inflation (Inf) in the GDP deflator (annual %).

Fixed-effect and random-effect econometric models for panel data were applied to examine the impact of an independent variable on the dependent variable. To identify the appropriate model for study, we have conducted a Hausman test against the hypotheses: H0: A random-effect model is appropriate, and H1: A fixed-effect model is appropriate.

As shown in Table 12, the Hausman specification test for this study has a p-value of 0.000 for the regression models. This indicates that the p-value is significant, and then the null hypothesis is rejected, as a fixed effect model is appropriate for the given data set in this study. The results in Table 12 indicate that the R-square value is 0.875 for our appropriate model, which indicates that the

independent variables (capital adequacy, equity to total assets, asset quality, liquidity ratio, total assets, management efficiency, interest spread, GDP, ownership, inflation) explain 87.5% of the variation in the dependent variable (financial performance) of MFI. Additionally, the results indicate that the F statistic value is 15.58 with a p-value of 0.000, which is less than the significance value of 0.05 ( $0.000 < 0.05$ ) hence, an indication that the regression model is significant and a good predictor of the relationship between the independent variables and the dependent variable. The results also indicate a statistically positive and significant relationship between inflation, ownership, interest spread, management efficiency, liquidity ratio, asset quality, capital an operational efficiency, and financial performance of microfinance institutions in Ethiopia. The findings are similar to those of Yenesew (2014), who found that operational or management efficiency and size of MFIs significantly affect MFIs' financial performance. Sudharika and Madurapperuma (2016) also found that operational efficiency and capital adequacy ratios significantly affect MFIs' financial performance. On the other hand, total assets (size of firm), GDP, and equity to total assets negatively affect the financial performance of MFI.

The effect of interest spread used as a proxy for microfinance liberalization positively affects MFI sector performance but is not statistically significant. It is known that when the financial sector is globalized, the interest rate spread will fall, which may negatively affect the MFI sector's performance in Ethiopia.

With regard to the microfinance industry, the finding has an important implication for financial sector liberalization policy. For instance, the result shows that managerial efficiency greatly contributes to improving the financial performance of microfinance institutions, and liquidity ratio, asset quality, and capital adequacy have positive impacts on those institutions' performance. In addition, the effect of interest spread, used as a proxy for microfinance liberalization, positively affects MFI sector performance. Thus, with the presumption that the microfinance industry will face tough competition when the sector is opened up to the rest of the world, to cope with the shock, the domestic microfinance industry needs to work on operational efficiency in advance. When the capabilities of the management team increase, it leads to the company's performance increasing. Regarding leverage, the microfinance industry needs to properly handle the debt-to-equity ratio, consider the firm's capital structure, and evaluate the relative risk and return associated with long-term debt and equity for

the microfinance sector. By so doing, the microfinance industry can perform better in the liberalized financial sector.

**Table 12: Microfinance Performance (ROA)**

ROA	Random			Fixed			GMM (2010-2020)		
	Coef.	Std. E	P>t	Coef.	Std. E	P>t	Coef.	Std. E	P>t
CA	2.917	1.408	0.038	1.575	2.190	0.158	0.564	2.020	0.780
ETA	-1.407	0.431	0.001	-2.415	0.330	0.000	0.257	0.754	0.733
AQ	0.322	0.123	0.009	0.084	0.141	0.558	0.007	0.145	0.963
LTA	1.016	0.335	0.002	0.241	0.313	0.450	-0.359	0.410	0.381
TA	-0.902	0.559	0.107	-0.428	0.449	0.351	-0.152	0.865	0.861
ME	-1.831	1.055	0.083	-2.798	1.066	0.016	-1.312	0.956	0.170
IS	0.986	0.627	0.116	0.135	0.491	0.786	0.481	0.773	0.534
GDP	0.383	0.321	0.232	-0.130	0.226	0.572	-0.419	0.226	0.064
Owner	1.702	0.425	0.000						
Inf	0.197	0.142	0.167	0.066	0.097	0.506	0.118	0.094	0.209
Constant	0.486	1.794	0.787	-1.279	3.582	0.725	-9.668	5.167	0.061
R square within		0.625			0.875				
R square between		0.912			0.081				
R square overall		0.776			0.231				
Wald chi2(10) = 93.32				F(9,20) = 15.58			Wald chi2(10) = 27.55		
Prob = 0.0000				Prob = 0.0000			Prob = 0.0021		
Haus. Test -Chi(Prob)		chi2(9) = 89.04		Prob = 0.0000					
Sargan Test -Chp(Prob)							chi2(13) = 24.03594		
							Prob = 0.0308		
Number of Groups		9		9			8		
Number of observation		38		32			22		

Source: authors' calculation based on National Bank of Ethiopia's Data, 2022

Ratios are calculated as ROA=Net income/Total asset; capital adequacy=total capital to total asset; asset quality=nonperforming /total loans; management efficiency= total expenses/total income

#### **4.4. Consequences of financial sector liberalization in Ethiopia**

Our main objective in this section is to estimate the effect of liberalization of the financial sector on global operators. Hence, Ethiopia does not open the financial sector to foreign operators; we can use proxies such as interest rate liberalization, efficiency, stability, and competitiveness. We used interest liberalization as a direct proxy for liberalization and other variables, such as efficiency and stability, as an indirect proxy for financial liberation. Thus, with other banking and macro-control variables, these variables were estimated in the study. To control for the macroeconomic variables, the GDP per capita, gross capital formation, human capital index, and inflation rate were used as control variables. These variables are taken from the world development indicators of the World Bank. The estimation was made for the short-run and long-run effects of financial liberalization. Before estimating the long-run effect, the long-run relationship among variables was checked using the ARDL bound procedure. Table 13 shows the computed F-statistics and critical values at 5 percent. If the statistic lies between the bounds, the test is inconclusive. The null hypothesis of no level effect is rejected if it is above the upper bound. If it is below the lower bound, the null hypothesis of no level effect cannot be rejected. In this estimation, F statistics fall above the upper bounds of critical values at the 5% significance level. This result indicates the existence of cointegration among variables.

##### **i. Long-run effect**

Table 13 shows that financial liberalization (deposit interest rate) positively affects gross domestic product per capita in the long run. A 1 percent increase in the financial liberation rate (deposit interest rate) increases GDP per capita growth by 0.048 percent, but the effect is not statistically significant. The positive sign of liberalization is consistent with the basic idea of McKinnon (1973) and Shaw (1973), who state that lifting restrictions on interest rates leads to a boost in saving, which subsequently increases capital accumulation and growth rates via a proper rate of return.

Moreover, the indirect proxy of financial liberalization-specifically, opening the financial sector to global investors on gross domestic product per capita was estimated. Table 14 shows the effects of inefficiency and stability. For example, the effect of inefficiency was negative and significant. Table 13 shows that the inefficiency variable (EFR) is negatively related to gross domestic product

per capita (GDPPC), indicating that when the inefficiency of the banking sector increases by 1 percent, the gross domestic product reduces by 0.044 percent, and the result is statistically significant. Many empirical studies, to mention a few, such as those by Claessens et al. (2001), Bayraktar and Wang (2005), and Hunegnaw and Adem (2021), showed that an increase in foreign bank share reduces domestic banking inefficiency by reducing costs and net interest margins. This result shows that opening the banking sector to the global market may improve economic growth indirectly by reducing banking sector inefficiency.

Another variable of interest, the Z-score as a stability indicator, positively affects the GDP per capita growth. This positive result suggests that Ethiopia's bank stability is essential to enhancing GDP per capita growth. Table 13 shows that as banking stability (the Bank-Z score) increases by 1 percent, the gross domestic product increases by 0.117 percent in the long run, which is statistically significant. However, many theoretical and empirical studies agree that when foreign banks' asset share increases in the banking sector, insolvency risks escalate, the sector's instability. When faced with capital or funding shocks at home, foreign banks might withdraw from cross-border banking activities to redirect lending at home (Peek and Rosengren, 1997 and 2000). Competition frugality: empirical studies suggested a negative effect of competition on banks' stability (Kasman and Kasman, 2015; Mulyaningsih et al., 2015). The result about foreign banks and stability is consistent with other empirical strands of evidence. Demirgüç-Kunt and Detragiache (2001) examined the relationship between banking crises and financial liberalization in 53 countries between 1980 and 1995. They found that banking crises were more likely to occur in countries with liberalized systems. This is especially true in developing countries where the institutional environment is weak. De Haas and Van Lelyveld (2014; 2017; and Dwumfour (2017) also argued that the presence of foreign banks might reduce banking stability. The result may imply that when the banking sector is opened to global operators, banking stability may increase and gross domestic product per capita will be harmed. Thus, opening the banking sector to foreign owners will indirectly reduce stability and GDP growth through this channel.

**Table 13: Estimated long run coefficients using the ARDL Approach**

ARDL(1,0,1,0,0,1,0,0,1) selected based on Schwarz Bayesian Criterion

Dependent variable is GDPPC

29 observations were used for estimation from 1991 to 2019

Regressors	Coefficient	Standard Error	Prob
GCFGDP	.219	.057	.001
STAB	.117	.042	.013
HC	.507	.099	.000
FC	-.610	.098	.000
INF	-.037	.009	.001
FLI	.048	.039	.241
EFR	-.044	.012	.002
FIVMOB	.046	.011	.001
INPT	8.991	.568	.000

Testing for the existence of a level relationship among the variables in the ARDL model

F-statistic	95% Lower Bound	95% Upper Bound	90% Lower Bound	90% Upper Bound
5.9249	2.8474	4.4581	2.3323	3.7400

Source: authors' calculation based on World Bank development indicators and financial development indicators and IMF Data, 2022

Where GDDPC is gross domestic product per capita (constant 2015 US\$); GCFGDP is the share of gross capital formation (% of GDP); STAB is the Bank Z-score proxy for bank stability, HC is the human capital index; Fc represents bank deposits to GDP ratio as a proxy to competition, INF represent inflation rate; FLI represents deposit interest rate; EFR represents efficiency ratio, FIVMOB represents Mobile subscriber per 100 adults.

In the long run, coefficients of control variables such as mobile bank subscription (FIVMOB), inflation rate (INF), human capital (HC), and gross capital formation to GDP ratio (GCFGDP) were found to be statistically significant. As expected, the gross capital formation to GDP ratio (GCFGDP) coefficient is

positive and statistically significant. It implies that a higher growth rate of capital accumulation is associated with a higher rate of economic growth, which is consistent with the main propositions of the Solow growth model and endogenous growth theory (Romer, 1986; Lucas et al., 1994; and Benhabib and Spiegel, 2000). From the results, the coefficient of gross capital formation ratio to GDP indicated that a 1-percentage point increase in gross capital formation ratio to GDP might increase GDP per capita by approximately 0.219 percent. Similarly, the human capital index (HC) has an expected positive sign, indicating that a 1 percent increase in the human capital index in Ethiopia increases GDP per capita by 0.507 percent. The indicator of financial innovation (mobile phone subscribers) also has an expected positive sign, indicating a positive effect of innovation on GDPPC.

On the other hand, high inflation rates as signals of macroeconomic instability have an expected negative impact on Ethiopia's gross domestic product per capita (GDPPC). This is because high inflation can destabilize the economy; consequently, the relationship between inflation and growth is expected to be negative. If inflation goes up by one percent, the GDPPC of Ethiopia falls by 0.037.

Generally, the empirical results in this research support the issue that opening the financial sector to the global market may have both costs and benefits for the Ethiopian economy in the long run. Foreign operators' entry into the financial sector may improve economic growth directly and indirectly by improving efficiency. However, the entry will reduce economic growth indirectly via increasing bank fragility.

## **ii. Short-run effect**

Table 14 shows the short-run coefficient and coefficient on ECT. Our error correction system is well-behaved and has a robust long-term relationship. The sign of the coefficient on ECT is negative, which is statistically significant. The negative coefficient ensures that the series is non-explosive to ensure that long-run equilibrium can be attained. The size of the coefficient on ECT determines the one-period response of the dependent variable to its deviation from equilibrium.

The ECT coefficient is  $-0.520$ . The value shows a deviation of GDP per capita from long-run equilibrium because the shock from last year is corrected by approximately 52% in the current year. The finding indicates a relatively slow pace of adjustment or convergence to equilibrium.

The short-run elasticities of efficiency and the indirect proxies of financial liberalization to GDPPC, were statistically significant, but the direct proxy for financial liberalization (deposit interest) is not statistically significant. Thus,

financial liberalization may improve GDPPC through increased efficiency in the short run. It may reduce GDPPC by reducing financial stability, such as banking fragility, but it is not statistically significant. All macro-control variables (gross capital formation to GDP ratio, GCFGDP, human capital (HC), and mobile subscriber (FTVMOB)) have a positive effect on GDPPC and are statistically significant except for inflation.

**Table 14: Error correction representation for the selected ARDL Model**

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ARDL(1,0,1,0,0,1,0,0,1) selected based on Schwarz Bayesian Criterion

The dependent variable is Dgdppc

29 observations used for estimation from 1991 to 2019

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Regressor	Coefficient	Standard Error	Prob
dGCFGDP	.114	.031	.001
dSTAB	.007	.016	.654
dHC	.264	.061	.000
dFC	-.317	.061	.000
dINF	-.010	.004	.010
dFLI	.025	.019	.206
dEFR	-.023	.008	.007
dFIVMOB	.014	.008	.081
ecm(-1)	-.520	.058	.000

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Source: authors' calculation based on World Bank development indicators and financial development indicators and IMF Data, 2022

The R2 and R2 are goodness of fit measures, which reasonably suggest a good fit for every country's data set. Variables jointly affect GDPPC. Table 14 shows diagnostic test results. To test for heteroscedasticity, we applied the Breusch-Pagan test. The test result shows that we cannot reject the null hypothesis: "the nonexistence of heteroscedasticity and Breusch-Godfrey serial correlation LM(X2H) test results show the absence of serial correlation problem at a 5% significance level".

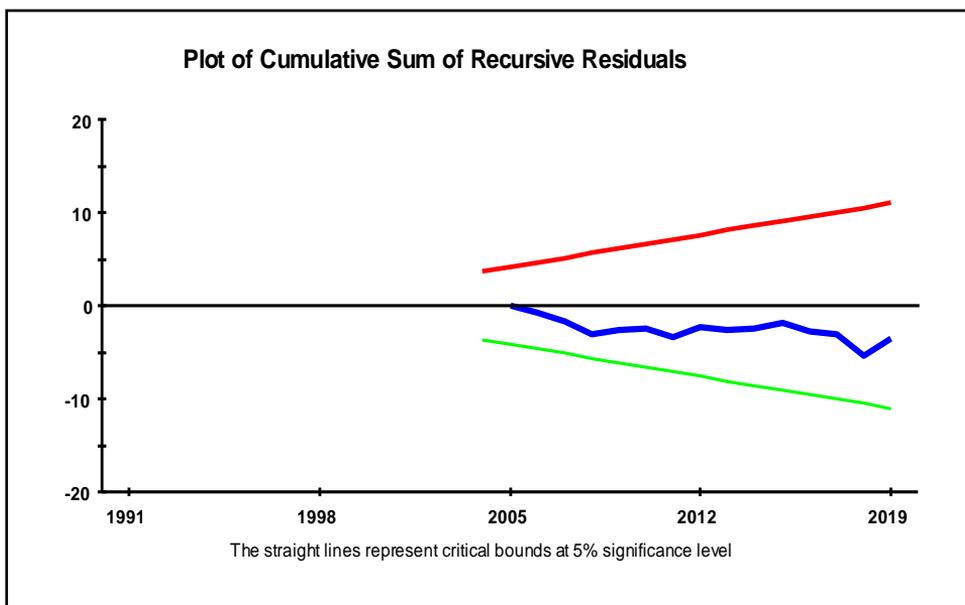
**Table 15: Diagnostic Tests**

Test Statistics	LM Version	F Version
A: Serial Correlation	CHSQ(1)=5.8440[.016]	F(1,15)=3.7856[.071]
B: Functional Form	CHSQ(1)=1.0541[.305]	F(1,15)=.56577[.464]
C: Normality	CHSQ (2)=1.9086[.385]	Not applicable
D: Heteroskadasticity	CHSQ(1)=2.0296[.154]	F(1,27)=2.0318[.165]

Source: authors' calculation based on World Bank development indicators and financial development indicators and IMF Data, 2022

The model also passed the normality Jarque Bera test at 5% significance. To examine the stability of long-run coefficients with short-run dynamics, we applied CUSUM Test. Figure 2 shows the straight lines representing critical bounds at a 5% significance level. The CUSUM plot does not cross the critical bounds.

**Figure 2: Model Stability Test**



## 4.5. Operators’ perceptions on Ethiopia’s financial sector and policy

### 4.5.1. *The Background of Financial Institutions*

We surveyed 51 firms in the financial industry in Ethiopia, of which 16 were banks, 16 were insurance companies, and 19 were microfinance institutions. 45 (90%) of these firms are privately owned, while the remaining belong to the public (6%), NGO (2%), and public-private partnership (2%) ownership. The average age of financial institutions is 20 years.<sup>1</sup>

**Table 16: Background of financial institutions**

Backgrounds		N	%
Type of Financial Sector	Bank	16	31.4
	Insurance	16	31.4
	Micro Finance	19	37.3
	Total	51	100.0
Ownership type	Public	3	6.0
	Private	45	90.0
	NGO	1	2.0
	Public-Private Partnership	1	2.0
	Total	50	100.0
<i>Average Year of Establishment</i>			20

Source authors’ calculation based on primary data survey, 2022

### 4.5.2. *Financial operators’ Perceptions on performance*

To examine financial operators’ perceptions of the current Ethiopian financial market and policy, we used a self-administered questionnaire, in which banks, insurance companies, and microfinance institutions took part. Accordingly, we asked the participants to rate their perception of the status of the Ethiopian financial sector using several indicators, such as efficiency, competition, stability, innovation, diversification, inclusiveness, and capability, as shown in Table 17 below. As can be seen in Table 17 below, the status of the Ethiopian financial sector is poor in terms of all dimensions. That is, the rating is below average for all

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<sup>1</sup> With regard to individual respondents representing financial institutions, 98% of the individual respondents have attained a bachelor’s degree or above education level. The average age of the individual respondents was 42 years. In addition, the individual respondents have been working in the financial industry for 14 years on average and in the current company for 8 years on average

of the dimensions. This implies that the financial operators generally perceive the current status of the Ethiopian financial sector as inefficient, less competitive, unstable, less innovative, undiversified, not inclusive, and poorly capable.

Scholars believe that the efficient, competitive, stable, innovative, diversified, inclusive and capable financial sector is better positioned to withstand the adverse effects of liberalizing the sector and exploit opportunities related to liberalization. If the financial sector performs poorly in terms of efficiency, competitiveness, stability, innovation, diversification, inclusiveness, and capability, the cost of liberalization would be higher than its benefits for domestic firms. In other words, this result implies that the firms in the financial sector are not yet ready to welcome the liberalization policy, at least soon. This suggests that the liberalization process should consider the current status of the financial sector, which is poor in terms of all dimensions, to be effectively implemented.

**Table 17: Operators’ perceptions of Ethiopia’s financial sector and policy**

	Mean	St. Deviation	N	Maximum	Minimum
Efficiency	2.55	.76	51	4.75	1.00
Competition	2.65	.58	51	4.00	1.00
Stability	2.65	.77	51	5.00	1.50
Innovation and Diversification	3.07	.73	51	4.50	1.00
Inclusiveness	2.36	1.06	51	5.00	1.00
Capability	2.79	.87	51	5.00	1.00

Source authors’ calculation based on primary data survey, 2022

#### **4.5.3. Financial sector operators’ perception on policy**

In addition, we assessed financial operators’ perceptions of the current policy guiding Ethiopia’s financial sector. We asked banks, insurance companies, and microfinance institutions to rate how they perceived the current policy guiding Ethiopia's financial sector using a scale of 1-5 (where 1 is ‘strongly disagree’ and 5 is "strongly agree").Our question items included whether or not the National Bank of Ethiopia has the required capability to supervise the financial sector, whether or not the current financial system regulations should be revised, the extent of the National Bank of Ethiopia’s involvement in formulating and implementing

policies; whether or not the share of the private sector should be increased; and the extent of foreign owners' participation in the financial sector.

As can be seen from Table 18, about 39% of respondents disagreed that the National Bank of Ethiopia has the capability required to supervise the financial system, while about 37% of them agreed, and about 24% of them were indifferent. This implies that many respondents perceive that NBE Ethiopia lacks the supervision capability that the financial system demands.

In addition, we asked respondents if they perceived that the Ethiopian financial system's regulation should be relaxed, and the majority (about 61%) agreed or strongly agreed. Similarly, a significant number (50%) of the respondents perceived that NBE's operations are not free from political interventions, while only 20 % perceived the opposite. It is believed that the autonomy of the regulatory body is vital for efficient and effective financial system management.

**Table 18: Operators' Perceptions of Ethiopia's financial sector policy**

No		Scale	N	Percent
1	Currently, National bank of Ethiopia has a required capability to supervise the Ethiopian Financial system	Strongly Disagree	5	9.8
		Disagree	15	29.4
		Neutral	12	23.5
		Agree	18	35.3
		Strongly Agree	1	2.0
		Total	51	100.0
2	Ethiopian Financial system regulation should be relaxed	Strongly Disagree	2	3.9
		Disagree	9	17.6
		Neutral	9	17.6
		Agree	23	45.1
		Strongly Agree	8	15.7
		Total	51	100.0
3	The national bank of Ethiopia operates free from political interventions	Strongly Disagree	8	16.0
		Disagree	17	34.0
		Neutral	13	26.0
		Agree	7	14.0
		Strongly Agree	5	10.0
		Total	50	100.0

No		Scale	N	Percent
4	Share of Private ownership should be increased in Ethiopia's financial sector	Strongly Disagree	0	0.0
		Disagree	2	3.9
		Neutral	10	19.6
		Agree	22	43.1
		Strongly Agree	17	33.3
		Total	51	100.0
5	It is better if foreign owners participate in the Ethiopian financial sector with limited share	Strongly Disagree	2	3.9
		Disagree	3	5.9
		Neutral	4	7.8
		Agree	29	56.9
		Strongly Agree	13	25.5
		Total	51	100.0
6	It is better if foreign owners participate in the Ethiopian financial sector without any limitation	Strongly Disagree	16	31.4
		Disagree	22	43.1
		Neutral	3	5.9
		Agree	6	11.8
		Strongly Agree	4	7.8
		Total	51	100.0

Source authors' calculation based on primary data survey, 2022

Furthermore, 76% of respondents believed that the share of private firms in Ethiopia’s current financial sector should be increased. Similarly, the majority of respondents (about 82%) perceived that the share of foreign banks in the current financial sector, if ever allowed, should be limited. Finally, about 75% of our research participants perceived that foreign participation in Ethiopia’s financial sector should not be without restrictions. The findings suggest that the current policy guiding the financial sector needs to be revised; the National Bank of Ethiopia lacks political independence in supervising and guiding the sector, the share of private ownership in the Ethiopian financial sector should be increased; the share of foreign ownership in the financial sector should be to a limited extent, and there should be some restrictions in allowing foreigners to operate in the country’s financial systems. The current policy guiding the financial sector should be given due attention if the sector must be liberalized.

We asked our respondents to rate their perception of the importance of strict supervision and regulation for developing the current financial system. 74% of the respondents agreed that strict supervision and regulation are essential for the current financial system. More specifically, 75%, 50%, and 94% of the respondents from the bank, insurance, and MFI sectors agreed that strict supervision and regulation are important for Ethiopia’s current financial sector. From the survey, banks and microfinance institutions seem to prefer more strictly supervised and regulated financial institutions than the insurance sector.

**Table 19: Regulation and supervision of the financial sector**

		<b>N</b>	<b>Percent</b>	
Sector	Bank	No	4	25.0
		Yes	12	75.0
	Insurance	No	8	50.0
		Yes	8	50.0
	Micro Finance	No	1	5.6
		Yes	17	94.4
Total	No	13	26.0	
	Yes	37	74.0	

Source authors’ calculation based on primary data survey, 2022

Following the above questions, we asked the operators about the specific areas of regulation or supervision they need to improve or be given more attention.

Accordingly, the following areas were identified to be given more attention from the supervisory and regulatory bodies. The regulatory and supervisory organs of the financial system need:

- To supervise and support the technology adoption and human resource development in the country's financial sector;
- To ensure impartial application of its laws and regulations to private and public institutions;
- To properly design and implement risk monitoring regulations;
- To design, formulate, and implement consumer protection policy;
- To avail a regulation that limits the maximum interest rate on loans;
- To strengthen regulations related to credit and foreign currency allocation’
- To provide strict supervision and ensure effective implementation of the existing directives;
- To ensure strict control and manage illegal money movement in the country;
- To revise directives continually to adapt to the changing situations;
- To closely supervise and support the process of providing loans and financial services to the rural farmers at an affordable rate;
- To regulate the financial markets and promote fair competition among firms in the financial industry;
- To revise regulations and directives on non-performing loans, reserve review, and capital adequacy;
- To provide close supervision and support to ensure cyber security in the financial sector;
- To revise its regulations related to reserve ratio and interest rate;

Our respondents also identified issues that they think the financial system in Ethiopia is facing due process of regulation and supervision. The major issues raised by respondents include the following:

- The regulatory body has limited capability to closely supervise and regulate the financial system;
- The government tends to monopolize the financial sector in the country; this hampers fair competition in the industry;

- Increase incidence of corrupt and unethical behaviors in the financial sector;
- Financial institutions have no or little participation when designing policies, regulations, and directives that govern the financial sector;
- Poor implementation of existing directives and regulations;
- Seldom use of appropriate technology in the process of supervision and regulation;
- Politically motivated and frequent changes in directives of the NBE, which make the regulatory environment unpredictable;
- Regulations and directives are not consistently implemented across the board;
- Directives and regulations are not up to the global standard, and neither are supervisions’
- Lack of pragmatic and proactive regulation and supervision policies;
- Supervisory efforts focus on operational issues instead of focusing on strategic issues;
- Many directives are more prohibitive than enabling business activities in the sector.

We further asked our respondents (operators) to suggest solutions to the challenges they faced in the financial sector during the supervision and regulation processes. Accordingly, they proposed the following approaches that may help the National Bank of Ethiopia improve the supervision and regulations of the financial sector in the country.

- The NBE needs to have a clear roadmap that enables it to effectively regulate and supervise the financial sector in the country;
- NBE needs to ensure the participation of stakeholders in the formulation of policies and directives;
- NBE may revise directives related to foreign currency surrender so that private; commercial banks shall fully utilize foreign currency coming from their own operations;
- NBE may ensure the merit-based appointment of higher officials instead of political affiliations alone;
- The insurance industry should be separated from NBE and supervised by an independent institution with the knowledge and skills that the insurance sector demands;

- The financial sector liberalization process needs to be supported by the right roadmap and effectively planned;
- NBE needs to capacitate itself technologically and intellectually to be able to effectively manage during and post-liberalization;
- The liberalization process needs to be implemented on gradually and progressively;
- The regulatory framework should be continuously revised to respond to the dynamic and changing environment effectively;

#### 4.5.4. *Inclusiveness of the Ethiopian financial sector*

Financial inclusion refers to efforts to make financial products and services accessible and affordable to all individuals and businesses, regardless of their net worth or company size. Financial inclusion aims to bring in digital financial solutions for the economically underprivileged people of the nation. It also intends to bring in mobile banking or financial services to reach the poorest people living in extremely remote areas of the country. We asked our respondents to rate the inclusiveness of Ethiopia’s financial sector. Overall, about 68% of the respondents rated the inclusiveness of Ethiopia’s financial sector as low or very low. More specifically, of those who reported low or very low, about 21% were banks, about 21% were insurance companies, and 26% were from microfinance institutions. Microfinance institutions are more likely to report low-level inclusiveness of the financial sector than banks and insurance companies.

**Table 20: Inclusiveness of Ethiopian financial Sector**

<b>How do you rate the inclusiveness of Ethiopian Financial Sector?</b>										
	<b>Very-Low</b>		<b>Low</b>		<b>Medium</b>		<b>High</b>		<b>Very-High</b>	
	<b>N</b>	<b>Percent</b>	<b>N</b>	<b>Percent</b>	<b>N</b>	<b>Percent</b>	<b>N</b>	<b>Percent</b>	<b>N</b>	<b>Percent</b>
Bank	3	6.4	7	14.9	5	10.6	1	2.1	0	0.0
Insurance	6	12.8	4	8.5	3	6.4	1	2.1	0	0.0
Micro Finance	5	10.6	7	14.9	5	10.6	0	0.0	0	0.0
Total	14	29.8	18	38.3	13	27.7	2	4.3	0	0.0

Source authors calculation based on primary data survey, 2022

Moreover, we asked respondents the reason for the low level of inclusiveness in the financial sector. The following major reasons were identified:

- The financial system is inaccessible, and the cost of credit is high;
- Society lacks awareness of financial services, and saving interest rate is unattractive;
- Limited use of financial technologies;
- Financial products are limited in diversity;
- Poor infrastructures such as internet, energy, and roads and high cost of expansion as a result;
- Lack of skilled manpower and unpredictable directives from the supervision body;
- Absence of competition to motivate banks to serve the unbanked population;
- Low of trust in the financial system of the country;
- The rural population lives highly scattered;
- Low-income level of the society;
- Poor security in remote areas of the country;
- The limited capacity of the financial institutions;
- High level of inflation;
- Lack of clear regulatory framework that facilitates financial inclusion;
- Illiquidity of financial institutions;
- Collateral-based credit provision;
- Lack of adequate and inclusive product development.

#### **4.5.5. *Ethiopian financial sector financial innovations and products***

The provision of customer-based and diversified financial products is crucial to competing in the post-liberalization era, which is expected to be much more competitive. Hence, it is vital to identify the financial products being provided by the local financial institutions to be able to know the extent to which these products are diversified customer-focused, and meet global standards. To this end, we asked banks insurance companies, and microfinance institutions to list the financial products they currently provide with their respective customers.

The result shows that the most common financial products banks provide in Ethiopia include checking accounts, savings accounts, certificates of deposit, mortgages, home equity loans, auto loans, personal loans, debit cards, traveler's checks, and currency exchange. Products such as money market accounts, credit cards, and safe deposit boxes are common financial products elsewhere but not yet

provided by Ethiopian banks. Hence, the majority of the banks' financial products are currently limited to basic financial products. In addition to providing diversified and up-to-date financial products, banks need to adopt recent innovations to remain competitive in the post-liberalization era. Hence, we asked our bank respondents to indicate their recently adopted innovations. Accordingly, most banks have adopted several innovations, such as ATMs, mobile banking, internet banking, electronic payment, electronic transfer, remittance technology, and agency banking. However, these financial institutions have not yet adopted innovations such as e-commerce<sup>1</sup>.

In the case of the insurance industry, the most common financial products provided by insurance companies in Ethiopia include life, motor, health, travel, property, and motor insurance. Products such as microinsurance and mobile insurance are less common in the insurance sector in Ethiopia. In addition, we investigated the extent to which these companies adopt innovative technologies to become competitive in the industry. Accordingly, claim automation and network system automation are the most commonly adopted innovations by insurance companies. However, insurance companies in Ethiopia seldom adopt insurance-related innovations such as online insurance, mobile insurance applications, e-marketing, biometrics, and remote data processing<sup>2</sup>.

Like banks and insurance companies, microfinance institutions (MFI) provide financial services to their customers. The most common MFI financial products include; agricultural loans, mid-term loans, emergency loans, individual loans, saving accounts, energy loans, and business start-up loans. To understand the innovation propensity of microfinance institutions, we asked them to identify recent innovations that their respective companies have adopted. According to their responses, network system automation is the most commonly adopted innovation. On the other hand, MFI-related innovations such as ATMs, mobile banking, remote

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<sup>1</sup> Innovations recently introduced in the banking industry include: Biometric identification of customers using fingerprint scanning for those individuals without ID cards, Remittance Tech, Dashen America Express international debit card, Amole mobile (internet banking), online(internet Banking), mobile banking, goal-oriented saving (new) products, Mobile money (CBE berr), ATM deployment (Bank to bank), agent banking, A platform that has mobile, internet merchant banking services), Automatic clearing house, Real-time gross settlement

<sup>2</sup> Innovations recently introduced in the insurance industry were; Automation, reinsurance, Insurance software upgrading, integrated insurance information system for continual improvement, Mobile insurance, Special Assistant, Medical Evaluation, Premium financing, Takaful insurance, Education insurance, New insurance, products like school fees for children ,Professional liability for doctors' and medical practitioners' insurance, With the connection to COVID-19, developed an online policy renewal system.

data processing, and biometric identifications are rarely adopted by MFIs in Ethiopia<sup>3</sup>.

Finally, understanding the major challenges hindering the innovation practices of financial institutions in Ethiopia is essential to improving future innovations. For this purpose, we investigated the challenges that financial institutions (banks, insurance companies, and MFIs) have faced in their innovation endeavors and identified the following major issues. The following are major challenges for innovation and product diversification in the Ethiopian financial sector. These are poor infrastructure (weak internet connectivity, power shortage in the rural area), knowledge gap, lack of awareness and resistance to innovation and financial products, limited knowledge and skilled manpower- technical challenges (post-implementation) to run the technology, limited capacity in conducting grand research (R&D), introduction of innovations is highly expensive, poor strategic leadership, and restrictive regulations of the government (National Bank of Ethiopia).

#### ***4.5.6. Sequences of the liberalization process***

It has been argued that opening up the financial sector to foreign operators should be done bit by bit. In order to know in what order activities should be done to effectively liberalize the financial sector, we identified five major activities related to the liberalization process and asked our respondents to rank the order of these activities. Then, after we calculated the weighted mean for each activity, as indicated in Table 21, the activity with the largest number implies that it needs to be done before any other activities. Accordingly, opening up the secondary financial market was ranked first, followed by the liberalization of capital accounts (offshore borrowing and multiple exchange rate markets), the liberalization of regulations on reserve ratio and interest rate, the liberalization of the domestic financial sector to foreign investors, and the privatization of existing public financial institutions (see Table 21 for the details). This finding is in line with the government's steps toward the liberalization of the financial sector. The government plans to open the stock market in the near future before liberalizing the financial sector to foreign operators.

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<sup>3</sup> Innovation recently introduced in the microfinance institution include; application of core banking, M-birr services, mobile money, electronic payment, network system automation, PAY GO, Youth Saving Product

**Table 21: Sequences of the liberalization process**

No	Activities	1st	2nd	3rd	4th	5th	mean	Rank
		N	N	N	N	N		
1	Privatization of existing public financial institution	9	6	5	8	16	2.6	5 <sup>th</sup>
2	Liberalization of regulations on reserve ratio and interest rate	5	8	13	11	7	2.8	3 <sup>rd</sup>
3	Liberalization of domestic financial sector to foreign investors	5	7	11	11	10	2.7	4 <sup>th</sup>
4	Liberalization of capital account (offshore borrowing and multiple exchange rate market)	5	14	10	8	7	3.0	2 <sup>nd</sup>
5	Opening of capital market	23	8	5	5	3	4.0	1 <sup>st</sup>

Source authors' calculation based on primary data survey, 2022

Note: (weight: first=5; second=4; third =3; fourth=2; fifth=1)

In addition to the sequence of liberalization, there can also be different modes of entry for foreign banks into host countries. A given economy may allow entry of a foreign bank either in the form of a subsidiary, branch, joint venture, or representative office, depending on the expected benefit earned by host economies. In fact, these modalities of entry may vary in terms of legal aspects, functionality, and flexibility. For instance, a branch is an extension of the parent company operating under the laws of another jurisdiction, so it is not a separate legal entity. A subsidiary (most typically a limited company) is a separate legal entity with separate legal liability, albeit typically owned and run by the parent company. Whereas a joint venture is created by two or more businesses pooling their resources and expertise to achieve a particular goal. The risks and rewards of the enterprise are also shared. Therefore, we believe that the mode of entry is mostly decided by the entrant company. But host economies could also sometimes set modalities of entry to be allowed for the sake of foreign financial sector experimentation before fully opening up. However, due to limited data on these issues, we are afraid to strongly suggest to the policymakers whether to allow or not specific types of entry modes for foreign entrant companies in the Ethiopian context.

#### **4.5.7. *Financial sector readiness***

The level of readiness of the financial sector to compete with foreign financial operators is very essential to minimize post-liberalization costs. In order to overcome the stiff competition expected from foreign operators, the local financial operators need to enhance their competitiveness levels ahead of time. To do so, our respondents suggest the following:

- The government needs to allow stock market in the country;
- Financial institutions, particularly banks, should take advantage of the digital economy by actively involved in digital finance and multi-channel banking systems using state of the art technology and capitalizing on the technological advancements;
- Financial institutions need to build up global capabilities in technologies, knowledge and skills;
- Financial institutions need to enhance their efficiencies (that is, operation efficiency); hold adequate capital (capital development); increase their foreign currency access and reserve;
- Financial institutions need to increase their research and development budget, focus on continuous improvement and develop their learning capability;
- They need to facilitate offshore borrowing for financial institutions;
- Financial institutions need to be innovative and customer focus;
- Financial institutions may adopt merger and acquisition strategies to build up their competitiveness;
- Financial institutions need to enhance their cyber security systems.

#### **4.5.8 *The consequence of financial sector liberalization***

Suppose opening up the financial sector to foreign operators (liberalization) is necessary. In that case, both the government and the domestic financial firms need to understand the possible consequences of liberalizing the financial sector, which is the first of its kind in the history of the Ethiopian financial sector. To identify the potential costs of the liberalization policy, we surveyed banks, insurance companies, and MFIs operating in Ethiopia. Accordingly, 98% of the respondents agreed that liberalization of the Ethiopian financial sector would benefit by bringing new skills, technology, innovations, and systems; 64% of the respondents agreed that liberalization of the financial sector would benefit from improved financial regulation and supervision; 76% of the participants agreed that

financial liberalization would lead to the development of the financial markets; 93% of the respondents agreed that financial liberalization may benefit from improving the financial system's infrastructure; 49% agreed that the overall stability of the financial system would be enhanced if the sector is liberalized; 90% of the respondents agreed that liberalization makes the financial sector more competitive; 94% of the respondents agreed that financial liberalization improves the sector's service quality; about 71% of the respondents agreed that credit supply would improve if the Ethiopian financial sector is liberalized; and 74% of them agreed that financial liberalization would benefit by facilitating the transfer of good financial institution practices.

**Table 22: Potential benefits of financial sector liberalization in Ethiopia**

	<b>Strongly Disagree</b>		<b>Disagree</b>		<b>Neutral</b>		<b>Agree</b>		<b>Strongly Agree</b>	
	<b>N</b>	<b>Percent</b>	<b>N</b>	<b>Percent</b>	<b>N</b>	<b>Percent</b>	<b>N</b>	<b>Percent</b>	<b>N</b>	<b>Percent</b>
Bring new skills, technology, innovations and system	0	0.0	0	0.0	1	2.0	17	34.0	32	64.0
Improve financial supervision and regulation	3	6.0	6	12.0	9	18.0	23	46.0	9	18.0
Development of financial markets	1	2.0	2	4.0	9	18.0	20	40.0	18	36.0
Improvement of the financial system's infrastructure	0	0.0	1	2.0	3	6.1	26	53.1	19	38.8
Enhance the overall stability	1	2.0	3	6.1	21	42.9	17	34.7	7	14.3
Competition will be enhanced	0	0.0	2	4.1	3	6.1	23	46.9	21	42.9
Improve quality service	0	0.0	0	0.0	3	6.0	23	46	24	48.0%
More credit supply can be offered	0	0.0	3	6.1	11	22.4	20	40.8	15	30.6
Transfer of good institutions practice	0	0.0	1	2.0	12	24.0	24	48.0	13	26.0
Introduce new product and service	0	0.0	1	2.0	5	10.0	21	42.0	23	46.0

Source authors calculation based on primary data survey, 2022

This indicates that liberalizing the financial sector of Ethiopia may lead to increased skills, knowledge, and technology transfers; an improvement of the financial supervision and regulation system; the development of secondary financial markets; improved infrastructure; the overall stability of the sector; enhanced competitiveness of local firms; improved quality services; increased credit supply; and the introduction of new financial goods and services.

Liberalization of the financial system also has costs. As can be seen from the table below, we asked respondents to indicate their agreement on costs related to liberalizing Ethiopia. Accordingly, 68% agreed that financial liberalization would weaken the local financial institutions; 46% agreed that financial liberalization would lead to increased operating costs; about 58% agreed that financial liberalization would cause sudden capital outflow (capital flight); 57% agreed that biased credit provision to big firms could cost financial liberalization in Ethiopia; 80% agreed that financial liberalization would lead to a fall in the market share of the domestic financial sector; about 41% agreed that foreign financial firms would promote home country exports instead of domestic exports if the financial system was opened up; 30% agreed that financial sector liberalization would trigger instability; and 42% agreed that financial sector liberalization would trigger supervisory difficulty.

In summary, opening up the Ethiopian financial sector to foreign operators may weaken the domestic financial firms, increase operating costs, lead to a foreign currency shortage (sudden capital outflow), caused domestic misallocation of capital flows, cause biased credit provision to big firms, decrease the market share of domestic firms, create a situation where the foreign financial firm will promote home country export instead of domestic export, lead to financial sector instability if not properly managed, and trigger supervision and regulation difficulties.

**Table 23: Potential costs of financial liberalization in Ethiopia**

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
Weakening of domestic financial sector (infant industry argument)	1	2.0	5	10.0	11	22.0	22	44.0	11	22.0
Foreign financial firm entry may increase operating costs	4	8.0	8	16.0	15	30.0	18	36.0	5	10.0
Sudden capital outflow (foreign shortage)	1	2.1	6	12.5	13	27.1	21	43.8	7	14.6
Domestic misallocation of capital flows	1	2.1	4	8.5	19	40.4	19	40.4	4	8.5
Biased credit provision to big firms	3	6.1	8	16.3	10	20.4	22	44.9	6	12.2
Fall of market share of domestic financial sector	1	2.0	4	8.0	5	10.0	27	54.0	13	26.0
Foreign financial firm will promote home country export instead of domestic export	2	4.1	6	12.2	20	40.8	15	30.6	6	12.2
Financial sector liberalization trigger instability	3	6.0	10	20.0	22	44.0	12	24.0	3	6.0
Trigger supervisory difficulty	4	8.0	6	12.0	19	38.0	14	28.0	7	14.0

Source authors calculation based on primary data survey, 2022

#### **4.5.9. *Macro-economic effect of financial market liberalization***

It is believed that financial sector liberalization policy has both macro and microeconomic impacts. We investigated the potential macroeconomic benefits of liberalizing Ethiopia's financial sector using a Likert scale of 5 rates, where 1 stands for strongly disagree, and 5 stands for strongly agree. We calculated the percentage of respondents who rated 1, 2, 3, 4, or 5. Accordingly, 82% of the respondents agreed that financial liberalization would speed up foreign direct investment; 55% of them agreed that financial liberalization would reduce the population to financial sector ratio; 63% of the respondents agreed that lending interest would be lower if the financial sector is liberalized; 67% of the respondents agreed that financial liberalization would reduce the cost of financial service; 73% agreed that financial liberalization would make economies of scale and scope possible; 83% of respondents agreed that if the financial sector is liberalized, consumer and mortgage credit will improve; 43% of them believed that there would be better economic stability if the financial sector is liberalized; 77% of them believed that if the financial sector is liberalized, employment and wage rate will improve; and 65% of them responded that financial liberalization would ensure a more stable source of credit.

Hence, if the financial sector of Ethiopia is liberalized, the potential benefits will be increase FDI, a reduced population to financial sector ratio, lowered lending interest rates, reduced cost of financial service, improved economies of scale and scope, improved consumer and mortgage credit, better economic stability, increased employment and wage rate, and a stable source of credit (see the below Table 24 for the details).

In addition to its macroeconomic benefits, financial sector liberalization will also have macroeconomic costs. In the same fashion, we asked respondents' level of agreement on costs related to liberalizing Ethiopia's financial sector. The result shows that about 26% (where 51% remained neutral) of the respondents agreed that financial liberalization would cause a loss of macroeconomic stability; about 45% (where about 28% of them remained neutral) of them believed that small firms will suffer from credit shortage if the financial sector is liberalized; about 35% (where about 37% remained neutral) of them agreed that if the financial sector is liberalized, foreign financial institutions may lack the interest to mobilize domestic capital; and about 65% of them agreed that financial liberalization would cause volatility of capital flows.

**Table 24: Potential macroeconomics benefits of financial market liberalization**

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
Speed up FDI	2	4.1	0	0.0	7	14.3	26	53.1	14	28.6
Reduce the population to financial sector ratio	3	6.1	6	12.2	13	26.5	22	44.9	5	10.2
Lower lending interest rate	1	2.0	5	10.2	12	24.5	21	42.9	10	20.4
Reduce cost of financial service	1	2.0	6	12.2	9	18.4	23	46.9	10	20.4
Possible economies of scale and scope	1	2.0	1	2.0	11	22.4	29	59.2	7	14.3
Improve in consumer and mortgage credit	2	4.2	0	0.0	6	12.5	31	64.6	9	18.8
Bring about better economic stability	1	2.0	7	14.3%	20	40.8	17	34.7	4	8.2
Increase in employment and wage rate	3	6.1	3	6.1	5	10.2	27	55.1	11	22.4
Provide a more stable source of credit	1	2.0	4	8.2	12	24.5	23	46.9	9	18.4

Source authors calculation based on primary data survey, 2022

The above discussion implies that the macroeconomic costs related to liberalizing Ethiopia's financial sector include loss of macroeconomic stability, financial exclusion because small firms will be denied credit services, limited interest by a foreign financial institution to mobilize domestic capital, and volatility of capital flows (see Table 25 below for the details).

**Table 25: Potential Macro-economic costs of financial market liberalization in Ethiopia**

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	N	Percent	N	Percent	N	Percent	N	Percent	N	Percent
Leads to loss of macroeconomic stability	3	6.1	9	18.4	25	51.0	11	22.4	1	2.0
Small firms will be suffered because of credit shortage	5	10.2	8	16.3	14	28.6	19	38.8	3	6.1
Lack of interest by foreign financial institution to mobilize domestic capital	4	8.2	10	20.4	18	36.7	15	30.6	2	4.1
Volatility of Capital Flows	2	4.1	1	2.0	14	28.6	29	59.2	3	6.1

Source authors calculation based on primary data survey, 2022

The primary reason behind investigating the possible benefits and costs of liberalization is to propose mechanisms that will help both the government and domestic financial operators capitalize on the potential benefits and minimize the costs. We asked our respondents to propose interventions that would minimize the costs of liberalization. The following solutions were proposed:

- a clear policy should be designed so that the local banks will not be affected and they can meet up to the level which is expected in the process of liberalization;
- avoid total liberalization; articulate prudent but less bureaucratic policies;
- compulsory insurance policy;
- interest /credit intervention is needed, including of poor society to be granted;
- create enabling business environment for all banks;
- develop capability and gradually liberalize;
- facilitate early merger and acquisition of domestic financial firms;
- government should negotiate on the amount of dividend that should be paid and reinvested to manage capital outflow;
- introduction of foreign financial institutions on acquiring less than 50% of shares each existing private financial sector;
- NBE should put a policy in place that makes the local institutions take advantage of the liberalization;
- Policy on capital outflow (flight), pricing policy, areas of investment and financing for banks, paid-up capital in terms of amount and currency etc;
- policy support, such as providing tax-free schemes to domestic firms in acquiring technology and other resources, relaxing some strange policies, loans and foreign exchange for domestic firms;
- promoting a digital-oriented banking system;
- strengthen the central bank's supervisory capacity; reorient leadership in the sector so that factors should be where it needs to be in bank management and digitization;
- strong preparation in regulation and supervision of foreign financial companies efficiently;
- strong regulatory and supervisory framework; allow foreign banks to participate in the domestic market with a minor share.

#### ***4.5.10. Financial operators' awareness level on the consequences of financial institution liberalizations***

Being aware of the consequences of the planned financial sector liberalization is essential to withstand its negative consequences. To know the extent to which domestic financial operators are aware of the consequences of liberalization, we asked banks, insurance companies, and MFIs to evaluate their level of awareness of financial sector liberalization. In general, about 21% of the respondents rated the level of their awareness of the consequences of financial liberalization as low or very high, whereas about 50% reported it as medium. Of those who reported low or very low income, banks account for about 6%, insurance companies for about 4%, and MFIs for about 11%. MFIs have the lowest level of awareness, followed by banks and insurance companies. The awareness level of the operators in the financial sector seems modest; however, more awareness-creation activities might be needed to make the liberalization process more effective; see Table 26 below for the details.

**Table 26: Financial operators’ awareness level of the consequence of financial liberalization**

	How do you evaluate your awareness level of the consequence of financial liberalization?									
	Very-Low		Low		Medium		High		Very-High	
	N	%	N	%	N	%	N	%t	N	%t
Bank	1	2.1	2	4.3	6	12.8	4	8.5	1	2.1
Insurance	1	2.1	1	2.1	9	19.1	4	8.5	1	2.1
MFI	0	0.0	5	10.6	8	17.0	4	8.5	0	0.0
Total	2	4.3	8	17.0	23	48.9	12	25.5	2	4.3

Source authors calculation based on primary data survey, 2022

## 4.6. Insights from NBE management members

### 4.6.1. Current policy guiding the financial sector

Based on our discussion with the vice presidents of NBE, we have summarized the following points: The guiding principles of the financial sector are inclusiveness, efficiency, competitiveness, and modernization. To enhance the above principles, the NBE has been working to liberalize the financial sector, including opening it up to foreign investors. Currently, the financial sector has already been opened to diaspora investors. Another top priority is the digital financing policy, which works to improve digital financing. The government has given priority to financial institutions that import financial technology. Management members mentioned the following reasons to prohibit foreign financial operators from entering the Ethiopian financial sector.

#### *i. Stability issue*

The major concern of foreign bank entry, as mentioned by the NBE management, is a stability issue. Their concerns have been raised and they believe that foreign banks can be a source of contagion. When faced with capital or funding shocks at home, foreign banks might withdraw from cross-border banking activities to redirect lending at home. This can be translated into a reduction in the capital that parents lend to their foreign affiliates, can negatively impact the supply of credit by these affiliates in the Ethiopian market. Empirical evidence such as

Schnabel (2012) also shows that the negative liquidity shock resulting from the Russian default led international banks to reduce lending domestic and foreign-owned Peruvian banks, reduced lending Peruvian firms. Other studies (De Haas and Lelyveld, 2013; Popov and Udell, 2012) focusing specifically on the recent global financial crisis suggest that global banks were transmitting shocks across borders through their affiliates at the height of the crisis. This transmission of bank distress of firm access to credit also occurred when shocks occurred to the parents' balance sheets of the foreign-owned subsidiaries. Another concern is that the domestic authorities will lose control over the banking system if foreign banks have a strong presence. International banks can engage in complex cross-border financial transactions, sometimes difficult to be monitored by either the host or the home country supervisors (Roldos, 2001).

Moreover, the home country's regulatory institutions may negatively affect foreign banks' decisions to lend, merge or acquire the host environment (Peek and Rosengren, 2000). A related issue is the inability of domestic banks to compete with high-performing international banks. Foreign bank entry may lead to lowered the interest margins, further weakening of domestic players, and bankruptcies (Peek and Rosengren, 2000).

*ii. Low supervision capacity*

Another justification they indicated is that the existing supervisory body cannot regulate the financial sector in the current situation if foreign banks are allowed to operate. It is true, and as the presence of foreign-owned banks grows, it increases the complexity of supervisory authorities' tasks. However, these challenges can be resolved through enhanced cooperation between home and host-country supervisory authorities and the development of additional international best practices. Mishkin (2005) argues that financial globalization should be taken as an important supporting force behind institutional reform.

*iii. Fear of foreign control.*

Foreign control over credit allocation implies substantial economic power in any economy. Officials from the NBE explained that foreign banks might serve as drains for the inward and outward capital flows. This may cause foreign exchange and liquidity shortages, adversely affecting the country's capital account. The concern becomes more pronounced given the limited regulatory capacity of the National Bank.

***iv. To protect public banks***

As we know, one of the government's major revenue-generating enterprises is public banks. As we know, the state-owned CBE is the dominant commercial bank and accounts for 70% of banks' total assets (as of May 2013, IMF 2013). If foreign investors enter the market, there is a possibility that these banks will incur huge losses because foreign banks will use large-scale and innovative technology. However, the authors argue that if foreign banks allowed the income generated from them to be taxed would exceed the revenue generated from CBE.

***4.6.2. A future perspective on opening the financial sector to global operators***

During a discussion with two vice presidents of the NBE, they said that the government is committed and ready to open the financial sector to foreign investors. As they stated, one step of commitment was easing the financial sector to Ethiopian-born foreign citizens, which happened for the first time since the free economy was endorsed in the early 1990s. However, they stated that the openness had been delayed due to the current political and global pandemic shock, and it was initially planned to open the financial sector within three years as of 2018. They stated that the financial sector would be open within a short period of time.

***i. Competency requirements***

The vice presidents suggested the following requirements for domestic financial institutions to compete with international bank operators:

- Technology - They should invest in technology to survive foreign banks' strife competition;
- The area of investment should follow project appraisal;
- Professionalism;
- The skill of workers shall be developed;
- Banks associations need to strong to reduce traditional competition instead of fair and healthy competition;
- Merging;

***ii. Potential benefits from current protection***

The following are key benefits obtained from current protection.

- Existing protection reduced competition so that citizens are participating in shareholding and making a profit
- Governments also get benefit from mobilizing capital for different projects

- Expected costs from opening up the financial sector to foreign participation
- Capital flight in the form of dividends will harm foreign currency reserves
- Sudden capital flight because of some shocks
- Stability issue

***iii. Potential benefits of opening up the financial sector to foreign participation***

The following are key potential benefits that can be obtained from opening of financial sector to foreigners

- The public benefit from the financial sector will be increased; currently, banks and insurance companies are surviving and enjoy stable profits at the expense of the public
- They bring technology and knowledge
- Competition and so that efficiency

***iv. Readiness of NBE to open up the financial sector to foreign participation***

- The following are key potential costs that can be obtained from opening of financial sector to foreigners Indirectly, the NBE is helping banks to be protected from new entries by forcing them to have 5 billion paid-up capital
- Banks are allowed to borrow from foreign institutions
- The Forex reserve or surrender requirement has declined except remittances and exports requiring 70% surrender.
- Some institutions are designed to provide training and consultancy to them
- Priority is given to importing technology
- The progress and readiness to open the banking sector are good except for current political and global pandemic shocks.
- Introduction of Basel III

***v. Autonomy of NBE in formulating and implementing policies***

National bank has taken the following key measures to make financial sector ready to open up the sector to foreigners.

- No problem with autonomy concerning finance
- Policy instrument: monetary and fiscal institution, there is currently freedom.
- Interest rate is open up
- KYC, which is an important step to opening up, is being implemented in every bank.

Know Your Customer (KYC) is verifying a customer's identity. The objective of KYC guidelines is to prevent banks from being used by criminal elements for money laundering activities.

Generally, from our discussion, we learned that there is a commitment by the current government to open the financial sector to foreign operators very shortly. Officials from the NBE believe that foreign banks would provide many benefits given the maturation of our banking system. The following benefits were mentioned during our discussion: The foreign banks will improve domestic bank efficiency by introducing new products, enhancing the competitive environment, and transferring knowledge and good banking practices, transfer of knowledge. They expected that if foreign banks were allowed to operate, the spillover effect would develop human resources capacity. This effect is more important to a developing country like Ethiopia, with low technological development and management skills. Thus, the spillover initially causes rising costs since domestic banks have to invest in such techniques and practices to implement them.

Moreover, the presence of foreign banks forced them to improve the quality of their services to retain their market share. In particular, foreign banks' presence may put old-style banking practices under pressure. Besides, increased competition may lower interest rate margins and profits. Finally, foreign banks with better technology and expertise assess the quality of feasible business, and the technology provides a better service in assessing risk business. Therefore, if they do not copy this practice, the domestic banks will be left with riskier business. In order to avoid the risks, the domestic financial sectors use better disclosure.

When we summarized their thoughts, the competition, transfer of knowledge, good banking practices and copying better disclosure from foreign banks will stimulate domestic banks to reduce costs, increase the efficiency and increase the diversity of financial service.

## **4.7. Lessons for Ethiopia from financial sector liberalized economies**

### **South Korea**

South Korea's economy was the fastest growing economy in the world until it faced a crisis in 1997. Starting from the early 1960s, its growth had been called a miracle. Korea's economic growth was based on strong government intervention in allocating resources (Cho and Kim 1995; Park 1993, 2001; Woo, 1991). The key instrument in this growth strategy was the government's control over the financial sector. We need to understand the dynamics of financial repression, liberalization, crisis, and the transition from a heavily state-controlled financial system to a market-oriented system. The role played by the government can be summarized as:

- First, the government selected priority sectors and supported investment into these sectors through interventions in credit allocation;
- Second, the government encouraged the mobilization of financial savings by implicitly guaranteeing financial institutions and creating incentives for them to maximize deposits and assets rather than profits; and
- Third, the government became an active risk partner in the corporate sector by controlling the financial sector and encouraging adventurous, aggressive investment expansion and capital accumulation. At times, the government also helped build markets and institutions.

Based on the study of Cho, Yoon Je (2002), the following lessons have been drawn from South Korean financial sector liberalization and financial sector development.

First, the perception that poorly managed banks need to be corrected via incentive structure to change the banking culture, including management priorities, risk management, and lending behaviors.

Second, once the perception is corrected, the preference of the household savers is also realigned.

Third, strengthening the regulatory norms also contributed to improved capital adequacy ratios, assets quality, transparency of management decisions and portfolio structures.

Fourth, the improvement of the governance structure, with outside directors taking the majority on board, has created great pressure for change in the banking culture.

Fifth, the capital market opening, which eliminated the limit on the share of foreign investors in the bank's capital, resulted in a situation where foreign

institutional investors own the majority share of the most commercial banks (except nationalized banks).

The Korean financial sector did not liberalize all at once. Rather, it has been indirectly controlling the credit and interest rates.

## **Indonesia**

Indonesia's phased and gradual approach to reforms appeared to mitigate some of the major risks of financial sector reforms. The first phase of the financial reforms in Indonesia involved the removal of direct credit and interest rate controls and shifted toward a more market-oriented credit allocation and monetary control system. Generally, Indonesian experience shows that:

- Liberalization was gradual;
- The first removal of direct credit and interest rate control;
- A shift toward a more market-oriented system of credit allocation and monetary control;
- The second phase of deregulation altered the financial system structure, with a substantial reduction in directed credit and a major increase in the number of financial institutions;
- Later on, the volatility of capital flows was managed by indirect monetary controls that varied interest rate;
- The increase in real interest rates following the reforms also appeared to be an important factor that contributed to an increase in deposit mobilization and helped to mitigate the rapid growth of bank credit;

## **Argentina**

The financial reforms in Argentina from 1977-1980 illustrate the risks of financial sector liberalization when other structural and macroeconomic policies are inadequate to support the liberalization. Unfortunately, the reforms did not sufficiently promote competition within the financial system, resulting in reshuffling of the existing institutions and ownership rather than undergoing through a fundamental reorganization. New instruments and markets in securities were not part of the reform. Consequently, the financial system remained uncompetitive and underdeveloped, and borrowers continued to rely mainly on bank's borrowing rather than on equity financing. Also, prudential controls were not developed, while at the same time, deposits were guaranteed by the state. As a result, there were moral hazard problems, and credit allocation was ineffective, resulting in an increasingly poor quality of loan portfolios among banks. The

macroeconomic policy also contributed to the failure of liberalization, where relaxed direct credit controls and initially low real interest rates allowed for a rapid expansion of bank credit. Concurrently, the government deficit increased, and gross domestic savings declined as a percent of GDP. In addition, the overvaluation of the exchange rate aggravated the external position and weakened the financial position of business enterprises. When the monetary policy was eventually tightened in 1981 due to the loss of confidence in the exchange rate, it precipitated a financial crisis because of the weak positions of banks and business enterprises. Generally, the following lessons could be learned from Argentina's failure cases:

- Financial sector liberalization was made before strengthening the inadequate structural and macroeconomic policies to support the liberalization;
- The reforms did not sufficiently promote competition within the financial system and largely resulted in a reshuffling of existing institutions and ownerships;
- Borrowers continued to rely mainly on bank borrowing rather than equity financing and the state-guaranteed deposits;
- As a result, there were moral hazard problems, and credit allocation was ineffective, resulting in an increasingly poor quality of loan portfolios among banks;
- The macroeconomic policy also contributed to the failure of liberalization, where relaxed direct credit controls and initially low real interest rates allowed for a rapid expansion of bank credit. Concurrently the government deficit was increasing, and gross domestic savings declined as a percent of GDP.

## **Chile**

The financial liberalization in Chile illustrates the risks of financial reform, even with fiscal adjustments and a restrictive monetary policy. Despite the highly positive real interest rates after the reforms, private credit growth was very rapid—more so than the growth of private sector deposits. This partly reflected the weak prudential regulations that permitted a rapid credit expansion to nonviable projects and subsequent distress borrowing because of the persistence of high real interest rates. In the meantime, the reduction in the fiscal deficit minimized the impact of the faster growth of credit than deposits on the investment-savings balance. However, the rapid credit growth associated with a high concentration of bank ownership, loans to interrelated entities, and inadequate supervision resulted in a

weak allocation of private credit and a serious banking crisis. Although the authorities in Chile revised the prudential regulations at the beginning of their reforms, the controls were poorly designed and inadequately implemented, particularly concerning the concentration of ownership, restrictions on bank loans to interrelated entities, and loan classification and provisioning requirements. There was also little market discipline at the banks because of implicit deposit guarantees. The weak prudential controls and rapid credit growth allowed banks and borrowers to become overexposed. A financial crisis resulted when financial conditions tightened in 1981 because of pressure on the overvalued exchange rate. In conclusion, the following lessons can be taken from the failure cases of Chile:

- High positive real interest rates after the reforms were in place led to a rapid private credit expansion to nonviable projects that resulted in distress on borrowing; and
- The rapid credit growth associated with a high concentration of bank ownership, loans to interrelated entities, and inadequate supervision resulted in a weak allocation of private credit and a serious banking crisis.

## **Botswana**

Most southern African development community countries introduced financial reforms in the late 1980s and 1990s (Mowatt, 2001). Prior to the reforms, the financial systems of most of these countries were largely controlled by the respective governments, real interest rates were negative, and there was a lack of competition, especially in the banking sector. Financial reforms positively turned real interest rates from negative to positive territory, despite the obstacles of high inflation and increasing savings and investments in several countries. To a large extent, financial reforms were successful in Botswana and Mauritius. Due to a market-oriented economy, savings and investments have been high in Botswana. This has positively increased the economic growth and propelled the country into middle-income territory with a high standard of living.

Botswana has embarked on several reform measures to facilitate the development of the financial sector over the past two decades. Major reforms that were implemented to encourage financial deepening and competition include the deregulation of interest rates, lessening commercial bank licensing requirements, and removing foreign exchange controls. Other important reform measures in the financial sector were establishing the Botswana stock exchange in 1989 and introducing government bonds to support the development of the domestic capital

market. The following lessons that can be considered from successful cases in Botswana:

- Prior to the reforms, the financial systems were largely controlled by the government, real interest rates were negative and there was a lack of competition, especially in the banking sector;
- After the financial reform, real interest rates changed from negative to positive territory, despite the obstacles of high inflation and increasing savings and investments in several countries;
- Due to a market-oriented economy, savings and investments have been high in Botswana that was resulting in a positive effect on increasing economic growth;
- Major reforms that were implemented to encourage financial reform in Botswana were;
  - \* In 1986 Removal of control on interest rates;
  - \* In 1989 Establishment of the Botswana stock exchange;
  - \* In 1990 Liberalization of commercial bank licensing requirements;
  - \* In 1991 Introduction of Bank of Botswana Certificates;
  - \* In 1995/96, Modernization of legislation (revised Bank of Botswana Act; Bank Act);
  - \* In 1999 Removal of foreign exchange controls;
  - \* In 2000 Launching of International Financial Service Center (IFSC) operations; and
  - \* In 2003 the introduction of 2-,5-, and 12- year government bonds were introduced.

## **Kenya**

Kenya has made remarkable progress over the last decade in expanding financial access. Three quarters of adult Kenyans are now with a formal account through which they can save and transact. The country has reached a level of financial access which is seen in more developed economies. The Brookings Institute's 2015 financial and digital inclusion report ranked Kenya as the first out of 24 emerging economies that are increasing access to affordable financial services. This progress is due, in large part, to the collective efforts of various players in the Kenyan financial system. Regulators opened the way for innovators to deliver groundbreaking solutions through digital technology; banks developed basic accounts delivered through branches and agents close to where people live

and work; and government social transfer programs are using the financial system to reach remote corners of the country (Heyer and King, 2015). The success of Kenya's financial digitalization is attributed to regulators' commitment and financial liberalization.

#### **4.8. Lesson on the sequence of liberalization**

An ordered process of financial liberalization is often emphasized to minimize the adverse impact of possible disturbances from the deregulation process on economic and financial stability. It is often suggested that domestic financial deregulation should ideally be implemented before opening the financial sector to competition from foreign financial institutions and the relaxation of foreign exchange controls. Similarly, it is suggested that trade deregulation should precede to the liberalization of external financial transactions and that current account deregulation should be implemented prior to the deregulation of capital flows (Shih, 1996).

In practice, however, the sequence may be distorted due to political considerations or pressure from both domestic and foreign interested groups. An example in Taiwan is that the correct sequence of deregulating the banking system would be to streamline the banking supervisory system, privatize government-owned banks, and finally allow the entry of new private commercial banks. However, protests from different interest groups and the lengthy administrative and legislative process have seriously delayed the privatization and upseted the planned sequence. In any event, the entry of new private banks has been allowed. First, the bank supervision system has not yet been fully streamlined, and government-owned banks are not yet privatized. Nevertheless, the Taiwan government eventually managed the financial sector liberalization process and was able to benefit from it.

The overall takeaway from the successful economies is that maintaining macroeconomic stability, strengthening financial institutions' capability to monitor and supervise, and following an appropriate sequence of the financial sector, liberalization<sup>20</sup> is among the pathways for successful financial sector liberalizations. Based on successful economic experiences concerning the sequence of liberalization, there is no uniformity across the board; rather, depending on the context. However, according to Patabendige & Senarath (2014) and Mohammed

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<sup>20</sup>Instruments used to liberalize financial sectors are credit controls, interest rate, entry barriers, gov't Regulation of operation, privatization, international capital flows

(2017), the optimal sequence of financial sector liberalization would follow the following order.

**Table 27: Optimal sequence of liberalization**

	Sequence 01 	Sequence 02 	Sequence 03
Order of sequence	Liberalizing of the real sector	Liberalization of the domestic financial sector	Liberalization of the external financial sector
Instruments	Fiscal discipline(stability) Elimination of implicit and explicit taxes and subsidy Privatization	Restricting /privatization of the domestic financial system Creation/reactivation of the money market	Liberalization of the current transaction (capital account) Creation of foreign currency exchange market and currency convertibility Control elimination on capital movement

In addition to the sequence of liberalization, there can also be different modes of entry of foreign banks to host countries. A given economy may allow entry of foreign banks either in the form of subsidiary, branch, joint venture, or representative office depending on the expected benefit earned by the host economies. In fact, these modalities of entry may vary in terms of legal aspects, functionality, and flexibility. For instance, a branch is an extension of the parent company operating under the laws of another jurisdiction so that it is not a separate legal entity. A subsidiary (most typically a limited company) is a separate legal entity with separate legal liability albeit typically owned and run by the parent company. Whereas, a joint venture is created by two or more businesses pooling their resources and expertise to achieve a particular goal. The risks and rewards of the enterprise are also shared. Therefore, we believe that the mode of entry is mostly decided by the entrant company. But host economies could also sometimes set modalities of entry to be allowed for foreign financial sector’s experimentation before fully opened up. However, due to limited data on these issues, we are afraid to strongly suggest the policymakers to whether allow or not to allow specific types of entry modes for foreign entrant companies in the context of Ethiopia.

## **5. Conclusion and Policy Implications**

### **5.1. Conclusion**

We conducted an in-depth analysis of the Ethiopia's financial sector in view of the government's plan to open up the domestic financial sector to foreign operators, a sector that has been strongly protected for years. More specifically, we examined, among others, the competitiveness of the domestic financial institutions (for example, banks, insurance, Micro finance institutions), determinants of their financial performances, potential benefits and costs of opening up the financial sector to foreign operators, innovativeness of the domestic financial institutions, government's regulatory capacity, and inclusiveness of the current financial system in the country. Hence, the following conclusion can be drawn from our findings.

- In terms of efficiency and profitability, Ethiopia's financial institutions perform poorly compared to financial institutions in sub-Saharan African countries.
- The current financial sector in Ethiopia can be characterized by monopolistic competition, indicating that the sector is not yet competitive enough given the government's protectionist policy and the presence of strong state-owned institutions in the sector.
- Both micro- (firm-specific) and macro-level variables were found to influence the operation of the financial institutions in Ethiopia. However, the nature of the influences of those variables depends on whether a firm is in the banking, insurance, or microfinance sectors. Firm-specific factors that influence the performance of the banks include asset liquidity, asset quality, loan to deposit ratio, and management efficiency. Liquidity, management efficiency, and company size play vital roles in the performance of insurance companies. Similarly, the performance of microfinance institutions is largely influenced by firm-specific variables such as ownership type, interest spread, management efficiency, liquidity ratio, asset quality, and capital adequacy.
- In both the long and short run, financial liberalization has both costs and benefits for the Ethiopian economy. Foreign operators' entry into the financial sector may improve economic growth directly and

indirectly by improving efficiency. However, the entry will reduce economic growth indirectly by increasing bank fragility.

- The potential benefits of liberalizing the Ethiopian financial sector include, among other things, an increase in skills, knowledge, and technology transfers; an improvement in the financial supervision and regulation capacity; development of secondary financial markets; improved infrastructure; enhanced competitiveness of local firms, improved quality services; increased credit supply; and the introduction of new financial goods and services.
- The potential costs of opening the domestic financial institutions to foreign operators include an increase in operating costs, a sudden capital outflow (capital flight), biased credit provision to big firms, a fall in the market share of the domestic financial sector, the promotion of home country exports instead of domestic exports, increased instability, and supervisory difficulties.
- From a microeconomic perspective, liberalizing the financial sector may have both positive and negative consequences. The positive consequences include FDI promotion, a reduced population-to-financial sector ratio, lowered lending interest rates, reduced cost of financial service, improved economies of scale and scope, improved consumer and mortgage credit, increased employment and wage rates, and a stable source of credit. Its potential negative consequences can be the loss of macroeconomic stability, the suffering of small firms from credit shortage, the lack of interest by foreign financial institutions in mobilizing domestic capital, and the volatility of capital flows.
- It has been widely believed that an inclusive financial system is vital for economic growth and development. However, our study results showed that the rural population, smallholder farmers, SMEs, and women have been largely excluded from the modern financial system in Ethiopia. This can be attributed to, according to our findings, weak competition in the sector to motivate banks to serve the unbanked population, poor infrastructure (internet, energy, and roads), poor security in remote areas of the country, limited use of financial technologies available in the market, collateral-based credit provision, a cost of credit that is high but a saving interest rate that is unattractive in society, and unpredictable directives from the supervision body.

- The findings suggest that the current policy guiding the financial sector needs to be revised; the National Bank of Ethiopia lacks political independence in supervising and guiding the sector; the share of private ownership in Ethiopia's financial sector should be increased; the share of foreign ownership in the financial sector should be limited; and there should be some restrictions in allowing foreigners to operate in the country's financial systems. The current policy guiding the financial sector should be given due attention if the sector needs to be liberalized.
- The majority of the financial sector's financial products and innovations are currently limited to basic financial products and do not adopt innovations (e-commerce, e-marketing, biometric identifications, and remote data processing). The major obstacles are identified as follows: poor infrastructure (weak internet connectivity, power shortage in the rural area), knowledge gap, lack of awareness, and resistance to innovation and financial products, Limited knowledge and skilled manpower: technical challenges (post-implementation) to run the technology; limited capacity in conducting grand research (R&D); introduction of innovations is highly expensive; poor strategic leadership; restrictive regulations of the government (National Bank of Ethiopia).
- Our survey results and literature review show that the financial sector liberalization sequence may be distorted because of political considerations or pressure from domestic and foreign interest groups. However, assuming normal conditions, the optimal sequence of financial sector liberalization would be an opening of the secondary financial market, liberalization of capital accounts (offshore borrowing and multiple exchange rates), relaxation of regulations on reserves and interest rates and opening up of the domestic financial sector to global operators, and privatization of existing public financial institutions. Prerequisites or lessons taken from other countries for the globalization of the domestic financial sector, especially banks as global operators, include:
- In view of international experiences, Ethiopia may benefit from the liberalization process by ensuring adequate prudential regulation and supervision of commercial banks, implying minimal accounting and legal infrastructure levels; a reasonable degree of price stability; Profit-

maximizing, competitive behavior by the commercial banks; fiscal discipline takes the form of a sustainable government-borrowing requirement that avoids inflationary expansion of reserve money by the central bank through direct domestic borrowing either by the government or through the indirect effect of government borrowing that produces surges of capital inflows requiring large purchases of foreign exchange by the central bank to prevent exchange rate appreciation; and a tax system that does not impose discriminatory explicit or implicit taxes on financial intermediation.

- The Main lesson that Ethiopia can learn from African and Latin American countries' failure and Asian successful financial liberalization before the financial crisis: A stable macroeconomic is an important variable in the success of financial liberalization.
- The findings from the literature show that financial liberalization policies should be implemented with caution, taking into account the context and timing of the policies to avoid endangering financial stability;
- The lesson from successful countries shows that financial sector liberalization should follow a gradual approach. First, a strong and stable economy needs strong financial sector institutions. Then, following a gradual approach, financial sector reforms could be put in place with strong indirect control based on the situation; and
- The lesson from failed countries shows that it is a crisis to liberalize the financial sector before strengthening the structural and macroeconomic policies that are inadequate to support the liberalization.

## **5.2. Policy implications**

Our findings have several implications to the financial sector operators and policymakers to effectively manage a vital structural transformation process which demands a strong commitment and a concerted effort of several stakeholders. In general, it is believed that liberalization of the financial sector has both micro and macro benefits; however, these benefits can be materialized if the liberalization process is well managed and properly implemented. We have developed policy implications based on our findings and suggestions are given by financial institution operators and key informants from the NBE, and from empirical

literature review. Policy suggestions can pre-liberalization and post liberalization but they are not exclusive.

### **5.2.1. *Pre-liberalization stage***

For the existing financial institutions and policymakers, this is a stage that involves proper management of activities and ready to compete in the expected new market environment and take opportunities and reduce threats of transformation of the financial sector.

#### **Financial institutions**

- Given the current technological, human, financial and organizational structure capabilities, the costs of liberalizing the financial sector may outweigh its benefits. Hence, our financial institutions need to work hard to bring themselves to the required level of readiness.
- Capacity building up (in organizational structure, technology, knowledge and skills, and financial resources). Therefore, financial institutions shall revise organizational design and strategic plans considering opportunities and threats that may arise due to the FS liberalization; increase investment on their R&D, and on technology; adopt merger and acquisition strategies to build competitiveness and allow offshore borrowing.
- Financial institutions need to enhance their cyber security systems
- Financial institutions shall actively involve in digital finance
- Investment shall follow strict project appraisal
- Professionalism and healthy competition and bank associations need to be too strong to reduce traditional competition.

#### **Government**

Government is primarily responsible for creating an enabling business environment; hence, before liberalization of the financial sector, government (NBE) shall:

- ensure stable macro economy; shall not consider it as a solution to macroeconomic instability.
- have clear policy on capital flight and negotiate on reinvestment to manage capital out flow (stability issues)

- introduce foreign financial institutions on acquiring less than 50% of shares from the existing private financial sector.
- ensure required level of capacity and capability in its supervision, leadership and digitalization (human capital, technology and organization structure) to properly manage liberalization. Therefore, NBE/government shall revise working policies, organizational structure, strategic plan, directives, and regulations; establish separate supervisory institution for insurance industry with the knowledge and skills that sector demands; investment on Rand D, training and technology closely supervise and work in supporting FIs to build up their human, technology, and financial capabilities ahead of FS liberalization identifying financial institutions' constraining (directives, regulations and replacing them); facilitate early merger and acquisition of domestic financial institution; tax-free schemes to domestic firms in acquiring technology and other resources; create enabling business environment for all banks(private and public)
- avoid total liberalization; articulate prudent but less bureaucratic policies
- introduce of compulsory insurance policy
- encourage greenfield foreign bank investment
- regulate and promote fair competition among firms in the financial industry
- ensure the participation of stakeholders in the formulation of policies and directives
- revise directives related to foreign currency surrender so that private commercial banks shall fully utilize foreign currency coming from their own operations.
- ensure the merit-based appointment of higher officials instead of political affiliations.
- Implement the liberalization process gradually and progressively.

### ***5.2.2. Post liberalization stage***

This involves the implementation of the regulations and directives related to liberalizations of the financial sector and monitoring of the implementation process.

### **Financial institutions**

- May need to have qualified leaders who can manage the transformation process.
- Implement of reward mechanisms that attract, motivate and retain skilled employees
- Establish strong monitoring evaluation systems and take corrective measures when and where necessary.
- Pursue product diversification strategies.
- Continue investment on innovations
- Provide differentiated and customized financial products to excluded population
- Continue improving management efficiency and quality of their service.

### **Government**

- monitoring the implementation of the liberalization policy and taking corrective measures
- when and where necessary to minimize potential risks (instability) associated with liberalization
- Decide the sequences of activities and gradual –liberalization than radical liberalization.
- Shall ensure implementation of liberalization in the right sequence.
- work with financial institutions to ensure financial inclusiveness (rural pop and small firms)
- supporting financial institutions to use technologies to address the needs of the disadvantaged groups
- Work with Financial institutions to design a solution to easy credit requirements to disadvantaged groups so that they can access credit with little constraint or without/little collateral requirements.
- May minimize potential risk of instability associated with liberalization
- Intervene with appropriate policy tools to avoid the unnecessary outflow of capital.
- ensure impartial applications laws and regulations to private and public institutions.
- Properly design and implement risk monitoring regulations
- Limit the maximum interest rate on loans

- provide strict supervision to ensure effective implementation of directives
- ensure strict control to manage illegal money movement in the country
- revise directives and regulations especially on nonperforming loans, reserve ratio, interest rate, capital adequacy

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